The
EDWIN F. Guth
COMPANY

2615 Washington Blvd.
St. Louis, Mo.

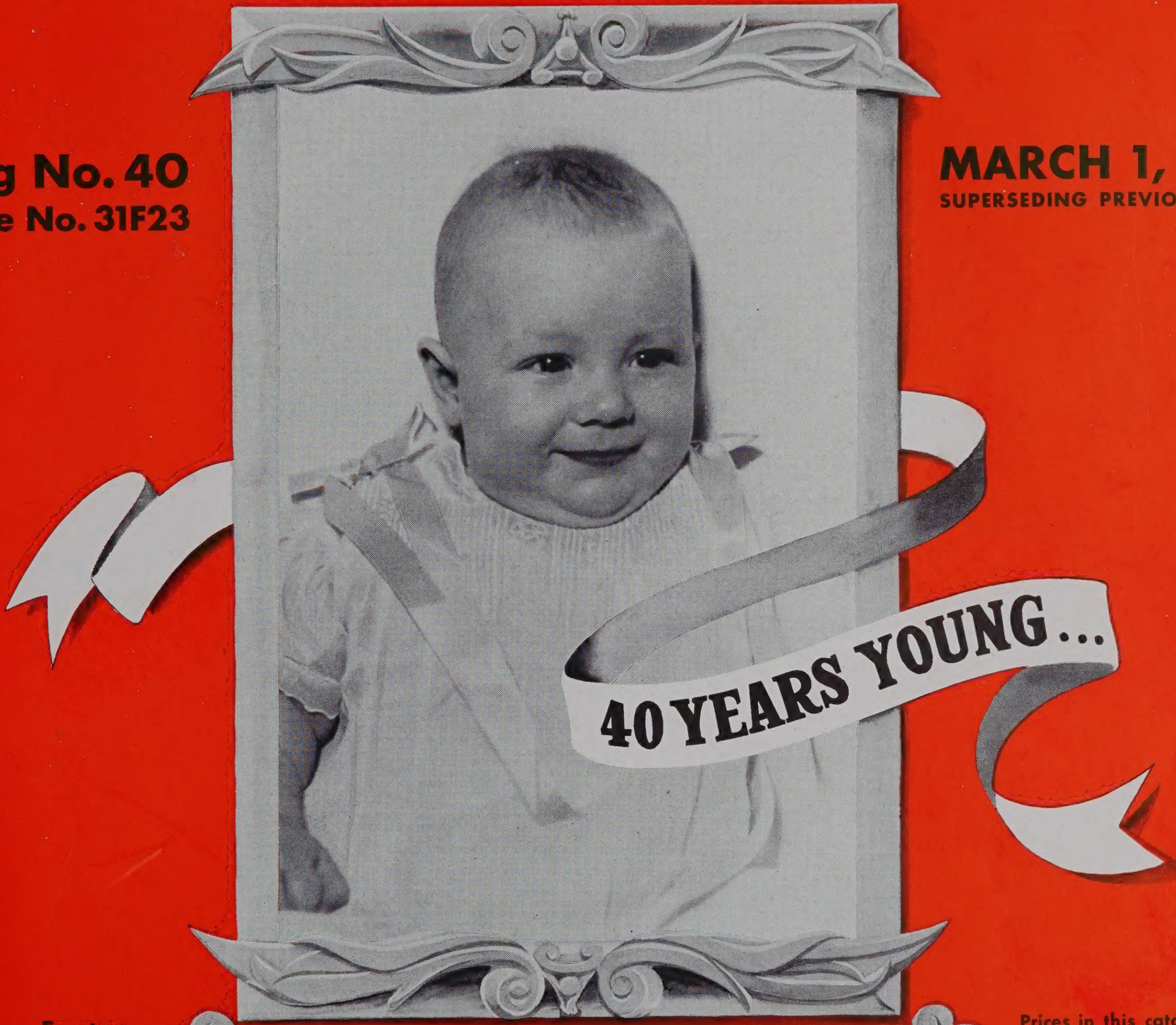
Fluorescent and Incandescent

LIGHTING EQUIPMENT

FOR THE OFFICE — FACTORY — AND STORE

Catalog No. 40
A. I. A. File No. 31F23

MARCH 1, 1942
SUPERSEDING PREVIOUS ISSUES


40 YEARS YOUNG...

CERTIFIED
E.T.L.
SPEC. NO. 6
HIGH P.F.
BALLASTS

High-Power-Factor ballasts are furnished in all Guth WIRED fixtures.

GUTH fixtures not only have large compartments to better dissipate the transformer heat (increasing efficiency and life) but also are a welded assembly of body, socket bridge and end-plates. This welded together rigid structure avoids parts becoming loose also prevents added vibration from transformer hum.

Prices in this catalog include full freight allowance on all single-lot-shipments of 100 lbs. or more to U. S. continent destinations.

The EDWIN F. Guth COMPANY
2615 Washington Avenue SAINT LOUIS, MISSOURI

"Leaders In Lighting Since 1902"

1902 — FOREWORD — 1942

The history of the Edwin F. Guth Company parallels the development of many light-sources. Founded in 1902, when artificial illumination was derived chiefly from Gas-Fixtures, GUTH has grown, constantly keeping abreast of the day's problems. We present in this Catalog, our finest line of Luminaires for both Fluorescent and Incandescent lamps.

Many engineering achievements and refinements, protected by 135 "Letters of Patents," have been embodied in our quality luminaire design and construction. GUTH developments, during the last 40-years, have started many new trends which exerted immeasurable influence in the lighting industry and earned for us the reputation of — "Leaders in Lighting Since 1902."

A partial list of our "best sellers" includes the famous BRASCOLITE, sold All Over the World; the fast-selling GUTHLITE of the Roaring Twenties; porcelain enameled AGLITES; "NO-SHADOWLITE," surgical fixture; the efficient indirect luminaire, "SUPER ILLUMINATOR"; and currently GUTH FLUORESCENT.

This, our Fortieth Anniversary, is a particularly appropriate time to announce the newest GUTH Development—"Eye-to-the-Future" Fluorescent Lighting, designed to afford permanent lighting system with flexible foot-candle capacity. "Eye-to-the-Future" GUTH FLUORESCENT, properly installed, provides effective lighting for present needs, and eliminates costly relighting when increased business or expanded production requires higher levels of illumination or a more shielded or diffused Lighting-System!

EDWIN F. GUTH COMPANY
2615 Washington Ave. • St. Louis, Mo.
"Leaders In Lighting Since 1902"

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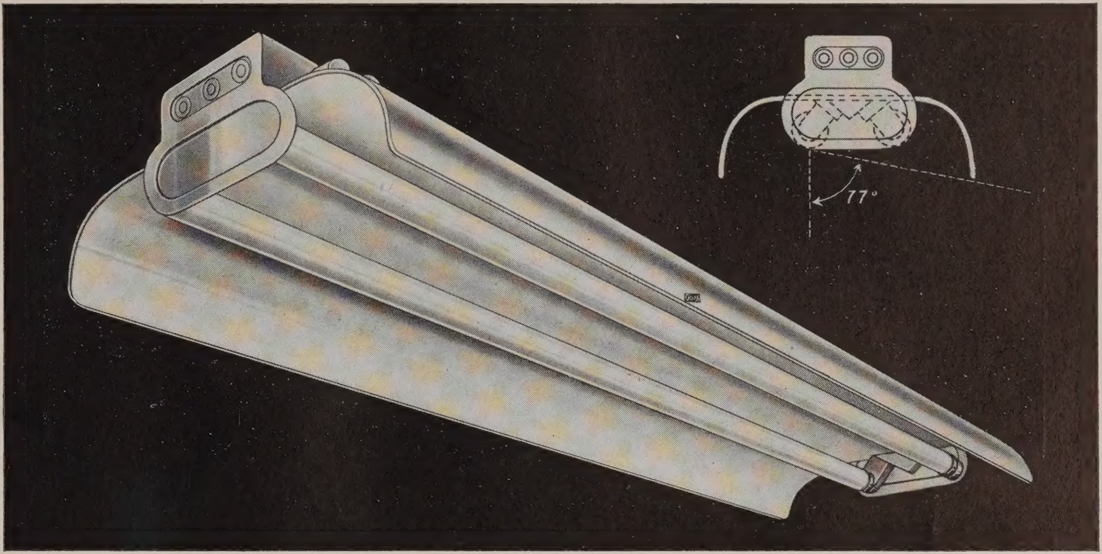
PRINTED IN U. S. A.

MAZE-LITE . . . *With Efficient, Lightweight Hard-Board Reflector*

TRADE MARK REGISTERED U. S. PATENT OFFICE



"300° WHITE" HARD-BOARD REFLECTOR

The new MAZE-LITE for 2-40, 3-40, and 2-100 Watt Fluorescent lamps, releases hundreds of tons of precious steel to build tanks, ships, guns and planes. MAZE-LITE'S reflector is formed of sturdy pressed-wood in lieu of steel! The new light-weight reflector readily accepts our durable "300° WHITE" finish enabling warplants everywhere to continue to get "Indoor Daylight" to speed urgent production. MAZE-LITE'S steel accessory housing with its excellent features is further described on this page.

MAZE-LITE'S REFLECTOR — Is formed of REFLECTOR-BOARD manufactured by the Masonite Corporation who cooperated with the War Production Board and Underwriters' Laboratories, Inc. to devise this special board for lighting fixture use. It is harder, more dense than any other board of its type. In its bare unfinished state, it absorbs only 5% to 6% by weight when immersed in water for 24 hours. This is a very important advantage and an extra precaution against "shorts" in the wiring circuit. The *plus* quality MAZE-LITE Reflector-Board is finished with "300° WHITE" synthetic enamels which are especially prepared to accommodate the flexible nature of the base material.

"300° WHITE"
88% Reflection Factor

"SIDE-OF-CHANNEL STARTERS": An added feature for easy "trouble-shooting." No need to remove lamps when checking starters. *All* Starters are in *one group* at *one end* of the channel—means only *one trip* up the ladder by the Maintenance Man.

"BUMP-PROOF SOCKET PLATES": Plates from the accessory housing extend behind lampholders to protect these Plastic devices against abuse during reflector-cleaning-time and during installation. A broken lampholder means a rewiring expense. The MAZE-LITE minimizes this costly factor. Specify "Bump-Proof Socket Plates" which act as "Buffers" against abuse, also insure upright socket positioning in-service.

EASY INSTALLATION: The MAZE-LITE can be mounted Singly, or in Continuous-Runs; in the latter case, knockouts in Channel-Ends permit locking-together of two or even three units on the bench, then, are mounted in 8′ or 12′ lengths—reflectors engaged after channels are in final position. Four knockouts in top of channel (2 on 25″ and 2 on 38″ centers) permit attachment with locknuts to ½″ conduit. Knockouts on 28″ centers permit hooking-on No. 8 Jack-Chain direct-to-channel—no angles or other parts need be screwed on at the job for this easier method chain mounting.

Cat. No.	Lamp Wattage	Lgth.	Width	Hght.	Ship. Wt.	List Price	Code
M2580	2-40W	48⅛″	13 11/16″	7″	22#	**$22.50**	PELAJ
M2585	3-40W	48⅛″	13 11/16″	7″	26#	**31.35**	PELEK
M2590	2-100W	60⅛″	16¾″	8″	35#	**40.00**	PELIL

Listed by Underwriters' Laboratories, Inc.

CONSERVE STEEL: The MAZE-LITE conserves Steel; the 48″ fixture portion uses only 5.6 lbs. and the 60″ only 6.7 lbs. of Steel. When No. 8 Jack-Chain is used for Hanging it attaches direct-to-channel—no extra parts—more Steel Conserved!

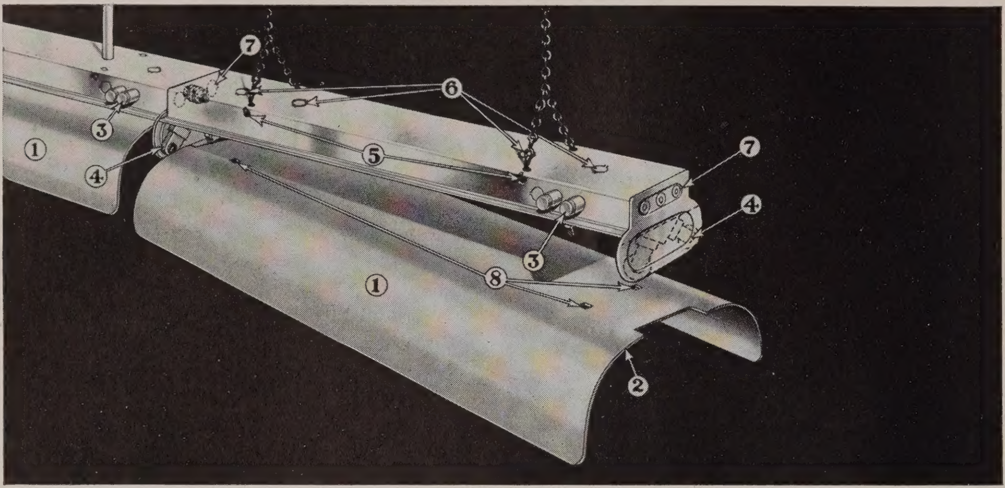
NOTES: Units listed above are wired, ready-to-install, for 110-125 Volt, 60 Cycle, A. C. Two-lamp units are 95-100% and three-lamp unit exceeds 90%, all High-Power-Factor. Units also available for 220-250 Volt and 199-216 Volt, 60 Cycle, A. C. at same prices as above. If other than standard wiring is desired, specify on order. Two-lamp units also available for either 110-125 Volt or 220-250 Volt, 50 Cycle, A. C.; for two 40-Watt unit, add $2.50 list and for two 100-Watt unit add $5.80 list. The two 40-watt unit is available for 220 to 240 Volt, D. C.; add $7.50 list—specify *exact* line voltage. All Tulamp ballasts available where two (or multiples thereof) three-lite units are run consecutively; two M2585 wired with three Tulamp ballasts for 110-125 Volt, 60 Cycle A. C., list price $58.70; wiring of one lamp must be done on this job in this case. If No-Blink Starters are desired add 25c list for each 40-watt lamp and $1.20 list for each 100-watt lamp. All prices are less lamps. MAZE-LITES (except those for D. C.) are inspected by Underwriters' Laboratories, Inc.

FREIGHT ALLOWANCE: Prices listed in table above include full-freight allowance to United States Continent destinations east of the Rockies, beyond which customer pays difference in freight-cost.

EDWIN F
Guth
COMPANY
LIGHTING EQUIPMENT
SAINT LOUIS, U.S.A.

Guth MAZE-LITE . . . *With Efficient, Hard-Board "300° White" Reflectors*

TRADE MARK REGISTERED U. S. PATENT OFFICE



Listed by Underwriters' Laboratories, Inc.

MAZE-LITES Features

1. Durable, "300° WHITE" synthetic Baked-Enamel Hard-Board Reflector provides 77° lamp-shielding.
2. Reflector edges are sanded clean, then saturated with separate brushed-on enamel coating to guard against moisture.
3. "Side-of-Channel Starters" for easy trouble-shooting. All starters in one group at one end of channel.
4. "Bump-Proof Socket Plates" protect lampholders from abuse and insure their upright positioning in-service.
5. Knockouts on 28″ centers for direct-attachment of No. 8 Jack-Chain to channel—no extra parts needed.
6. Knockouts on 25″ and 38″ centers for attachment of ½″ Conduit with locknuts.
7. Three knockouts in each End for locking channels together for End-to-End Mounting.
8. Four-Point (No-Screws) Suspension insures retention of reflector-shape, and convenient reflector removal.

SPECIFICATIONS FOR THE MAZE-LITE

REFLECTOR: Formed of extra dense hard-board (Masonite REFLECTOR BOARD) especially treated for minimum water absorption. Physical characteristics of the board (when unfinished) are:

1. Weight—0.80 lbs. per sq. ft., 2. Caliper—0.125 inches, 3. Specific Gravity—1.25 avg., 4. Modulus of Rupture—12,000 lbs. per sq. inch, 5. Water Absorption—5% to 6%—24 hours immersion in water.

Reflector provides 77° shielding of the lamps. Reflector edges are sanded clean, then saturated with separate brushed-on enamel coating. This is followed by "300° WHITE" enamels which are specially prepared for the flexible nature of the board. A "Sealer Coat" is baked-on, followed by a white ground coat inside, and finally a "Finish-Coat" white baked-on for 88% or more R. F. Exterior is finished "300° Gray."

ACCESSORY CHANNEL: Of 22 U. S. Gauge steel, is degreased and finished "300° Industrial Gray." Houses all accessories and is complete with welded-on "Bump-Proof Socket Plates" (see below). Three knockouts in each end for locking units together. Ends are vertically flat for flush abuttment of units. Four knockouts in channel-top (two on 25″ and two on 38″ centers) for attachment of ½″ conduit with locknuts. Knockouts on 28″ centers for direct-attachment of No. 8 Jack-Chain to channel. Starter Switches protrude from side-of-channel in one group at one end.

ACCESSORIES: Ballasts are High-Power-Factor type (Tulamp are 95-100% and Single Lamp is 90% or better) and are in compliance with Specifications for Fluorescent Mazda Lamp Auxiliaries. Lampholders are White Plastic of 90° rotating-lock type. Units are wired complete, ready-to-install, and are listed by Underwriters' Laboratories, Inc.

"BUMP-PROOF SOCKET PLATES"

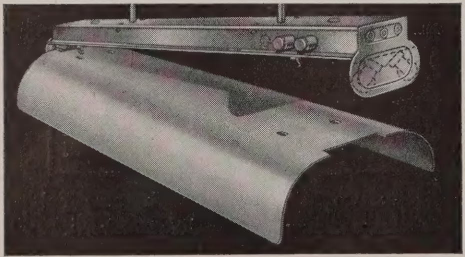
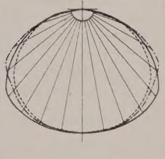


Photo to left demonstrates added lampholder protection afforded with the ingenious "Bump-Proof Socket Plates." Lampholders are better protected: (1) During Transit, (2) During Installation, (3) During Reflector-Cleaning periods. Cut down costly breakage and rewiring costs—insist on "Bump-Proof Socket Plates."

COEFFICIENTS OF UTILIZATION

LIGHT CURVE	Ceiling	75%			50%		
	Walls / Room Index	50%	30%	10%	50%	30%	10%
	J	.39	.34	.29	.39	.34	.29
	I	.48	.43	.40	.47	.42	.39
	H	.53	.48	.45	.52	.48	.45
	G	.57	.53	.49	.56	.53	.49
	F	.61	.57	.53	.60	.55	.53
	E	.65	.62	.59	.64	.61	.60
	D	.70	.67	.63	.68	.66	.63
MAZE-LITE FLUORESCENT	C	.73	.69	.66	.70	.67	.66
	B	.76	.73	.70	.74	.71	.69
	A	.78	.75	.72	.76	.72	.71

NOTES: Coefficients above are for the two 40-watt M2580 MAZE-LITE. For the M2585, three 40-watt unit, multiply Foot-Candle intensities by 1.45. For the M2590 two 100-watt unit, multiply Foot-Candle intensities by 1.90.

EDWIN F.
Guth
COMPANY

2615 Washington Avenue **St. Louis, Mo.**

FORM No. 716—10-42

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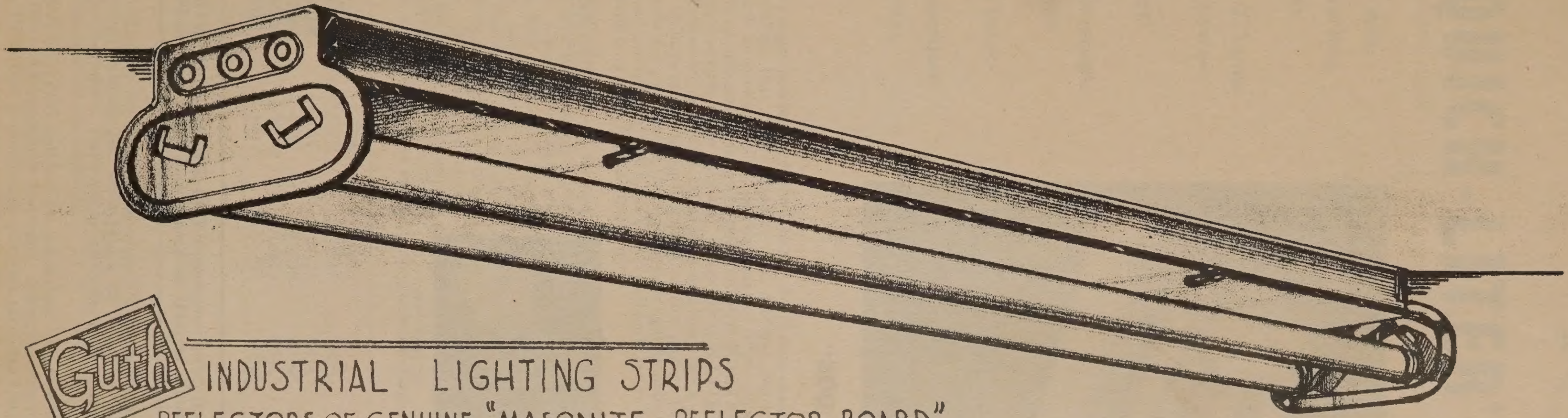


INDUSTRIAL LIGHTING STRIPS

REFLECTORS OF GENUINE "MASONITE REFLECTOR-BOARD"
FINISHED 300° WHITE

Cat. No.	Lamp Wattage	O.A. Lgth.	Width	Depth.	Std. Carton	Ctn. Shp.Wt.	Price Ea.Unit	Code
MRB-1640	2-40W	48-1/4"	6-3/4"	5-1/4"	2	32#	$19.25	PEREP
MRB-1850	3-40W	48-1/4"	6-3/4"	6"	2	40#	31.00	PERIR
MRB-2040	2-100W	60-1/4"	6-3/4"	5-1/4"	2	55#	42.00	PEROS

Complying with W.P.B. order L-78, Guth Industrial Lighting Strips are furnished with Non-Metallic reflectors made of genuine Masonite REFLECTOR-BOARD. Channel is of 22-gauge steel. Guth's "3-In-1" End-Plates serve as: 1 - Bridges to hold the Lampholders, 2 - Ends to the fixture, and 3 - "Bump-Proof" Protectors minimizing abuse to the Lampholders. Reflector is easily removed by turning two of the four large reflector-clips -- no screws or nuts used. Each End has 3 Combination-Knockouts for joining strips end-to-end, also for Pull-Switches, if desired. Excluding accessories, each four-foot unit contains 5½# of steel, and each five-foot unit contains 6½# of steel. Reflectors are finished "300° White"; Channels and Ends finished "300° Gray".

The Edwin F. Guth Company
St. Louis, Missouri

Form No. 628-10-42

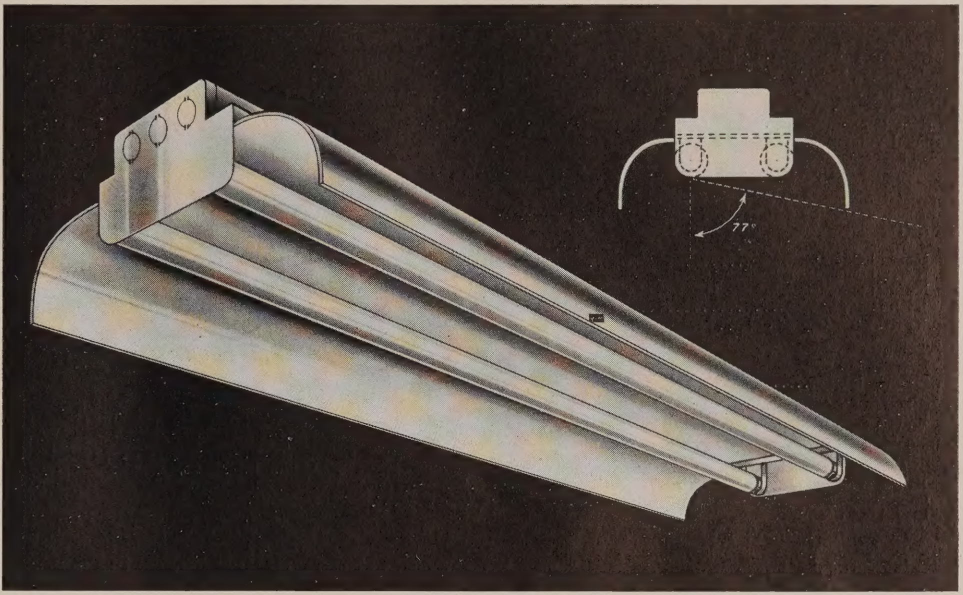
Printed in U.S.A.

Guth QUICK-LITER* . . . Powered by New SUPER BALLAST

*TRADE MARK

FEATURES ARE:

1. **Instant Starting**
2. **No Starter Switches**
3. **Starts at 0° Temp.**
4. **Starts at Lower Voltages**
5. **Low Power Losses**
6. **Non-Stroboscopic**
7. **Max. Lumen Output**
8. **No Radio Interference**
9. **Quiet Operation**
10. **High-Power-Factor**



"300° WHITE" HARD-BOARD REFLECTOR

QUICK-LITER is a super-powered unit for 2-40 and 2-100 watt standard Fluorescent Lamps that light instantly and without Starter Switches. Inasmuch as probably 85% of conventional Fluorescent troubles are directly or indirectly due to Starters, the QUICK-LITER "no-starter" feature is a time-saver in itself. Other QUICK-LITER features are described to left above; detailed data and tests made on QUICK-LITER's ballasts are given on the back of this page. The QUICK-LITER ballast is guaranteed for one-full-year against defective workmanship and material. QUICK-LITER'S ballast is made by the largest manufacturer of Neon Sign Transformers.

"300° WHITE"
88% Reflection Factor

QUICK-LITER REFLECTOR—Is formed of REFLECTOR-BOARD manufactured by the Masonite Corporation who co-operated with the War Production Board and Underwriters' Laboratories, Inc. to devise this special board for lighting fixture use. It is harder, more dense than any other board of its type. In its bare unfinished state, it absorbs only 5% to 6% by weight when immersed in water for 24 hours. This is a very important advantage and an extra precaution against "shorts" in the wiring circuit. The *plus* quality QUICK-LITER REFLECTOR-BOARD is finished with "300° WHITE" synthetic enamels which are especially prepared to accommodate the flexible nature of the base material.

"BUMP-PROOF SOCKET PLATES": Plates from the accessory housing extend behind lampholders to protect these Plastic devices against abuse during reflector-cleaning-time and during installation. A broken lampholder means a rewiring expense. QUICK-LITER minimizes this costly factor. Specify "Bump-Proof Socket Plates" which act as "Buffers" against abuse, also insure upright socket positioning in-service.

EASY INSTALLATION: QUICK-LITER can be mounted Singly, or in Continuous-Runs; in the latter case, knockouts in Channel-Ends permit locking-together of two or even three units on the bench, then, are mounted in 8′ or 12′ lengths—reflectors engaged after channels are in final position. Four knockouts in top of channel (2 on 25″ and 2 on 38″ centers) permit attachment with locknuts to ½″ conduit. Knockouts on 28″ centers permit hooking-on No. 8 Jack-Chain direct-to-channel—no angles or other parts need be screwed on at the job for this easier method chain mounting.

Cat. No.	Lamp Wattage	Line Voltage	Lgth.	Width	Hght.	Ship. Wt.	List Price	Code
M2530	2-40W	110-120	48⅛″	13$\frac{11}{16}$″	7″	24#	**$27.50**	PEMEL
M2531	2-40W	220-240	48⅛″	13$\frac{11}{16}$″	7″	24#	**31.90**	PEMON
M2532	2-100W	110-120	60⅛″	16¾″	8″	37#	**58.50**	PEMIM
M2533	2-100W	220-240	60⅛″	16¾″	8″	37#	**60.80**	PEMUP

CONSERVE STEEL: QUICK-LITER conserves Steel; the 48″ fixture portion uses only 5.6 lbs. and the 60″ only 6.7 lbs. of Steel. When No. 8 Jack-Chain is used for Hanging it attaches direct-to-channel—no extra parts—more Steel Conserved!

NOTES: Units listed above are wired, ready-to-install. High-Power-Factor (95% or more) ballasts, and white-plastic 90° rotating-lock type lampholders are furnished. Units are for 60 cycle, A. C. Other voltages or lamp-size units are not available.

GUARANTEE: QUICK-LITER ballasts are guaranteed for one-full-year against defective workmanship or materials. Defective ballasts will be replaced by the ballast manufacturer (through the Guth Company) within one-year from date of shipment from the Guth factory, providing they have been properly installed on correct line-voltage under normal conditions. Replacements are made f. o. b. St. Louis.

FREIGHT ALLOWANCE: Prices listed in table above include full freight allowance to United States Continent destinations east of the Rockies, beyond which customer pays difference in freight-cost.

Guth QUICK-LITER* . . . *Uses No Starter Switches . . . Eliminates Starter Troubles*

*TRADE MARK

Powered Differently — Starts at Lower Voltages and Temperatures

"300° WHITE" HARD-BOARD REFLECTOR

QUICK-LITER is powered by a Super-Ballast and requires no Starter-Switches. The 2-40 watt, 110-120 volt Super-Ballast has been examined and approved by Underwriters' Laboratories, Inc., when used with proper Lampholders, as supplied in QUICK-LITER.

To right is comparative data between QUICK-LITER'S Super-Ballasts and conventional Tulamp ballasts. To right below are reports of various tests made by well-known concerns.

REPORT BY LARGE ELECTRICAL LABORATORY

Date: October 8, 1941

on QUICK-LITER'S 2-40 Watt Super-Ballast

INPUT:

CONDITIONS	AMPERES	WATTS	VOLTS
Normal Operation, line	0.78	90	120
Normal Operation, leading lamp	1.15	58	120
Normal Operation, lagging lamp	1.26	53	120
Both lamps shorted	0.25	22	120

Results **ACCEPTABLE** in view of rating of not over 1 amp., 118 volts A. C.

OUTPUT:

Leading lamp..........0.425 M. A.
Lagging lamp..........0.378 M. A.
Operating voltage......... 95 volts
Starting voltage..........360 volts

THERMOCOUPLE TESTS:

Ballast enclosure, Primary end . . 44°
Ballast enclosure, Secondary end . 41°

Results **ACCEPTABLE.**

INSULATION TESTS:

Ballast still warm from temperature tests. Current-carrying parts and non-current-carrying metal with a potential gradually raised to 1900 U. A. C. Maintained for 1 minute.

Results **ACCEPTABLE,** no breakdown.

CONDENSER TEST:

Shorted with lamps in place. 3 amp. fuse opened, causing both lamps to go off.

Results **ACCEPTABLE.**

DEFECTIVE LAMP TEST:

Both lamps had filaments burnt out.

Started in normal manner, and normal operating conditions throughout the transformer.

No Overheating or other abnormal effects.

FLASH TEST:

Flashed 9,000 times at the rate of 6 flashes per minute.

Lamps darkened 3" from end.

Finish of test: Lamps lighted in normal manner, although filaments were burnt out.

Results **ACCEPTABLE,** inasmuch as no hazards produced by failure of lamp filaments.

COMPARATIVE DATA

QUICK-LITER 2-40 Watt Ballast		CONVENTIONAL 2-40 Watt Ballast
118 Volts	Line Voltage	118 Volts
15 Watts	Power Losses	15 Watts
95 Watts	Watts Input	95 Watts
0.9 Amps.	Amps. Input	0.85 Amps.
80 Volts	Lowest Starting Voltage	105 Volts
95%	Power Factor Corrected	96%
0° F.	Lowest Starting Temperature	40° F.

QUICK-LITER 2-100 Watt Ballast		CONVENTIONAL 2-100 Watt Ballast
118 Volts	Line Voltage	118 Volts
22 Watts	Power Losses	35 Watts
222 Watts	Watts Input	256 Watts
2.0 Amps.	Amps. Input	2.1 Amps.
81 Volts	Lowest Starting Voltage	108 Volts
96%	Power Factor Corrected	95%
0° F.	Lowest Starting Temperature	40° F.

TESTIMONIAL

A large Cleveland, Ohio, industrial plant (name upon request) operated 2000 2-40 Watt units (with identical ballast as in QUICK-LITER) since November, 1941. The following is a report of the Chief Electrical Engineer at this plant.

Ques.—Have you experienced unusual replacements, more so possibly than if you used conventional type ballasts? *Ans.*—No.

Ques.—Do you consider these new ballasts as being ruggedly built, with as good or better electrical characteristics as conventional ballasts? *Ans.*—Yes.

Ques.—If you have low voltage or irregular voltage at your plant, has this affected starting or operation? *Ans.*—No. (Has not affected starting or operation.)

Ques.—Do you estimate a definite saving in maintenance and servicing costs due to no bother with starter switches? *Ans.*—Yes.

Ques.—What make lamps are you using? *Ans.*—General Electric and Westinghouse.

Ques.—Do the lamp manufacturers refuse to guarantee their lamps when used with this new type ballast? *Ans.*—No.

Ques.—Do lamps flicker, spiral or swirl as they do with conventional type ballasts? *Ans.*—For a short time sometimes.

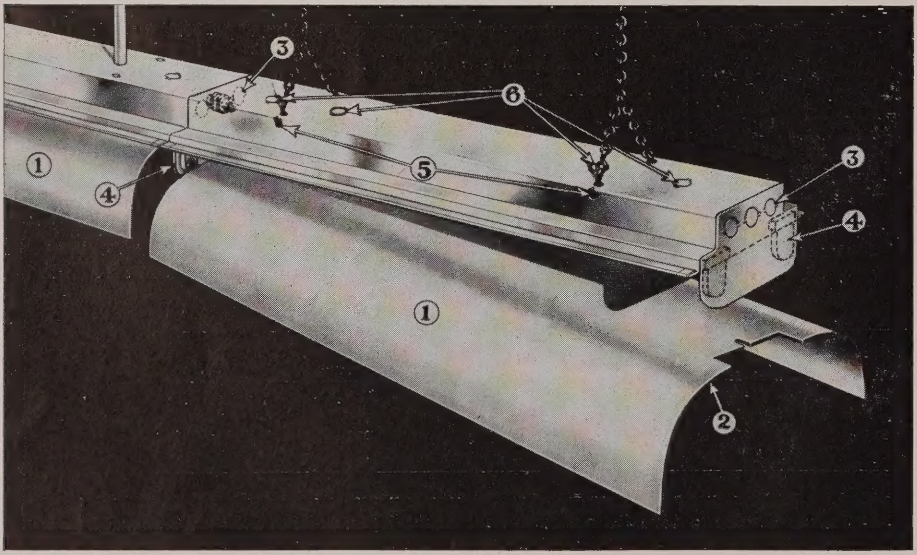
Ques.—How long each day do your lamps burn? *Ans.*—24 hours a day.

Ques.—How many times each day are your lamps turned on and off? *Ans.*—Week ends only.

Ques.—What is the average Lamp-Life that you have experienced? *Ans.*—2500 hours.

Ques.—Do you replace groups of lamps at regular intervals, or each lamp as it burns out? *Ans.*—Each lamp as it burns out.

Ques.—Do you consider this new type ballast as being definitely better, as good as, or not so good, as would be your installation with conventional type ballasts? *Ans.*—Better.



QUICK-LITER'S CONSTRUCTION FEATURES

1. Durable, "300° WHITE" synthetic Baked-Enamel Hard-Board Reflector provides comfortable lamp-shielding.
2. Reflector edges are sanded clean, then saturated with separate brushed-on enamel coating to guard against moisture.
3. Three knockouts in each End for locking channels together for End-to-End Mounting.
4. "Bump-Proof Socket Plates" protect lampholders from abuse and insure their upright positioning in-service.
5. Knockouts on 28" centers for direct-attachment of No. 8 Jack-Chain to channel — no extra parts needed.
6. Knockouts on 25" and 38" centers for attachment of ½" conduit with lock-nuts.

EDWIN F. Guth COMPANY

"Leaders In Lighting Since 1902"

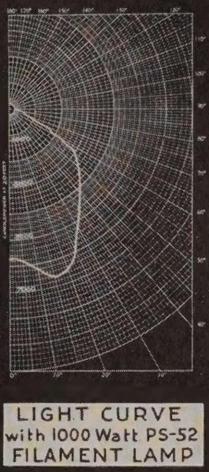
2615 Washington Avenue St. Louis, Mo.

FORM No. 725—10-42

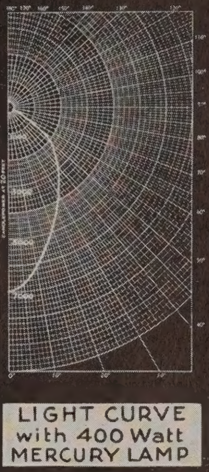
PRINTED IN U.S.A.

Guth VICTORY HIGH-BAY FOR INCANDESCENT AND MERCURY - VAPOR LAMPS

Twenty-Inch Porcelain Enameled Steel Reflector



LIGHT CURVE with 1000 Watt PS-52 FILAMENT LAMP



LIGHT CURVE with 400 Watt MERCURY LAMP

SUPER WHITE PORCELAIN ENAMEL REFLECTING SURFACE

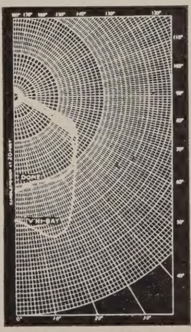
FOR BETTER Horizontal and Vertical Illumination in High-Bay (25′ to 50′ Mounting Height) areas, specify VICTORY HIGH-BAYS. Made for 750-1500 Watt Incandescent lamps, and for 400-watt Mercury-Vapor lamp, VICTORY'S large 20-inch "reflector-mouth" produces maximum light-output for this type unit. High-Bay areas require a reflector designed to insure two important functions: 1. Greater Candlepower in the 0° to 30° zone for greater Horizontal Illumination; 2. Ample Vertical Illumination by means of high proportionate Candlepower in the 35° to 55° zones. VICTORY HIGH-BAYS afford these advantages.

SPECIFICATIONS: Twenty-inch Reflector with roll-welded neck, formed of enameling steel. Reinforcing bottom beaded-edge. Finished "3-Coat" Porcelain Enamel, electrically fused-on at 1600° F.; Super-White inside, Industrial Gray exterior. Heavy-duty porcelain Lampholder when assembled with reflector conforms to temperature and construction specifications by Mazda Lamp Manufacturers. Die-cast, 2-piece Lampholder fittings, tapped for ½″ or ¾″ conduit, as specified. Overall efficiency of AAA301 exceeds 70% which includes 67% or more in 0° to 60° zone. Light cutoff is at 55°. Candlepower at 55° is 40% or more, of the maximum Candlepower which is at 15° from Nadir. All parts approved by Underwriters' Laboratories, Inc.

★ "THE CASE" FOR VICTORY HIGH-BAY REFLECTORS ★

Comparative distributions to right, are those of 1000-watt VICTORY HIGH-BAY and DOME reflector units. For high mountings (25′ to 50′), the VICTORY HIGH-BAY provides the best lighting job. Here's why . . .

Work performed in high-bay areas usually consists of easy-seeing task jobs, therefore, the greater Candlepower (40% to 50% greater) provided by VICTORY HIGH-BAYS in the 0° to 30° zones is a distinct advantage for greater Horizontal Illumination. Good Vertical Illumination is necessary where Production Work and Assembly Work is performed in high-bays and where work is done at vertical angles as well as on horizontal planes. VICTORY HIGH-BAYS provide for this factor by means of high-proportionate Candlepower in the 35° to 55° zones. Note in curve comparisons the greater average Candlepower by VICTORY HIGH-BAYS in these zones. Insofar as Candlepower from 55° to 70° zones is concerned, by the time this light "arrives" at floor level, in the average high-bay area, that light is negligible even as a vertical lighting component, inasmuch as that light has decreased in Intensity Inversely as the Square of the Distance it has travelled.



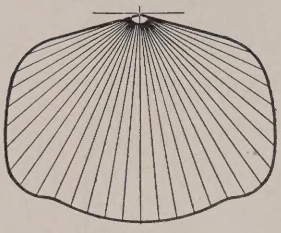
Comparative Distributions

In conclusion, "The CASE" for VICTORY HIGH-BAYS is this: Superior Horizontal Illumination (40% to 50% greater) can be expected with proper layout. Adequate Vertical Illumination is better provided by greater average candlepower in the 35° to 55° zones. VICTORY HIGH-BAYS use a portion of the "spill-light" from Dome units (in 55° to 70° zone) to better advantage by directing that light to the 0° to 55° zone.

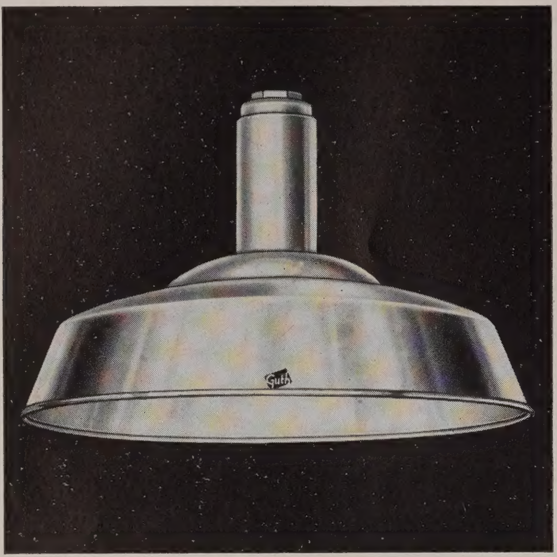
Lamp Wattage	Type Lamp	Std. Lamp-holder	List Price	Shock Absorbing Sockets	List Price	Refl. Dia.	O. A. Hght.	Std. Pkg.	Pkg. Shg. Wt.
750-1500	C	AAA301	**$11.30**	SAS301	**$11.45**	20″	19″	5	60#
400	H	AAA302	**11.30**	SAS302	**11.45**	20″	19″	5	60#

NOTES: Fittings are tapped ½″ standard; ¾″ if specified at same price. Prices are less lamps. AAA302 does not include Transformer or Reactor. All prices are F. O. B. St. Louis, with full-freight-allowed on single lot 100 pound shipments, east of the Rockies.

Guth VICTORY DOMES *. . . For Low-Bay Areas*



LIGHT DISTRIBUTION



★

72½ Degree Light-Cutoff

Listed by Underwriters' Laboratories

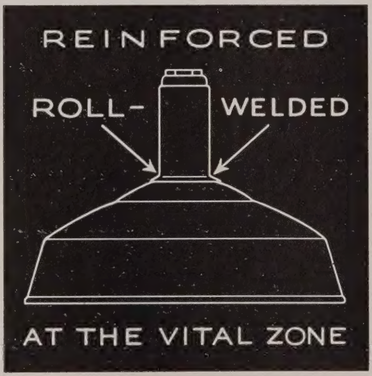
★

SUPER WHITE PORCELAIN ENAMEL REFLECTING SURFACE

VICTORY DOMES are reflector-units for Low-Bay areas. They efficiently provide illumination shielded to a point 72½° from the vertical. VICTORY DOMES are finished "3-coat" Porcelain Enamel with Industrial Gray exterior same as on Guth Fluorescent units.

FINISH: Three separate electrical firings at 1600° F. fuses the durable Porcelain Enamel to the steel-base. Electrical firing means a "cleaner," a "whiter" reflecting surface. The "3-coat" job means the finest finish there is in Porcelain Enameling art. Reflector exterior is Industrial Gray Porcelain.

REINFORCED NECKS: An improved "electric-welding" process roll-welds reflector to neck, which feature strengthens the "Vital Zone." Steel is drawn more uniformly and thicker by Guth's 2-piece construction which provides double metal thickness at the vital neck portion. Roll-welding, electrically and continuously, seals this double-thickness into a homogeneous, stronger neck.



LAMPHOLDERS: All sockets furnished with VICTORY DOMES are listed by Underwriters' Laboratories, Inc. Pull-Chain sockets are available for individual control of units with chain hanging straight down inside of the reflector. Shock-absorbing sockets are available to extend lamp-life by added filament protection against jarring and vibration in factory areas.

CATALOG NUMBERS

Lamp Wattage	Type Lamp	Std. Keyless Sockets	List Price	Pull Chain Sockets	List Price	Keyless Shock Absorb. Sockets	List Price	Refl. Dia.	Std. Pkg.	Shg. Wt. Std. Pkg.
75-100	C	AAA260	**$3.75**	PCS260	**$4.75**	SAS260	**$3.90**	10″	10	32#
150	C	AAA261	**4.10**	PCS261	**5.10**	SAS261	**4.25**	13″	10	40#
200	C	AAA262	**5.25**	PCS262	**6.25**	SAS262	**5.40**	16″	10	48#
250	H	AAA263	**5.25**	—	—	SAS263	**5.40**	16″	10	48#
300-500	C	AAA264	**6.90**	—	—	SAS264	**7.05**	18″	5	39#

NOTES: Fittings are tapped ½″ standard; ¾″ if specified at same price. Prices are less lamps. Add 10% for quantities less than standard package. All prices are f. o. b. St. Louis, with full-freight-allowed on single-lot 100-pound shipments, east of the Rockies, beyond which customer pays difference in freight.

SPECIFICATIONS: Complete units include reflector, socket and threaded fittings. VICTORY DOMES cut off light at 72½°. Two-piece construction with reinforcing roll-welded neck. Finish 3-coat, Porcelain Enamel, White inside and Industrial Gray outside.

1902 — Fortieth Anniversary — 1942

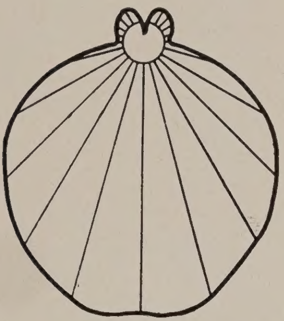
FORM No. 715-11-42
THE EDWIN F. GUTH CO.
ST. LOUIS, MO.

PRINTED IN U.S.A.

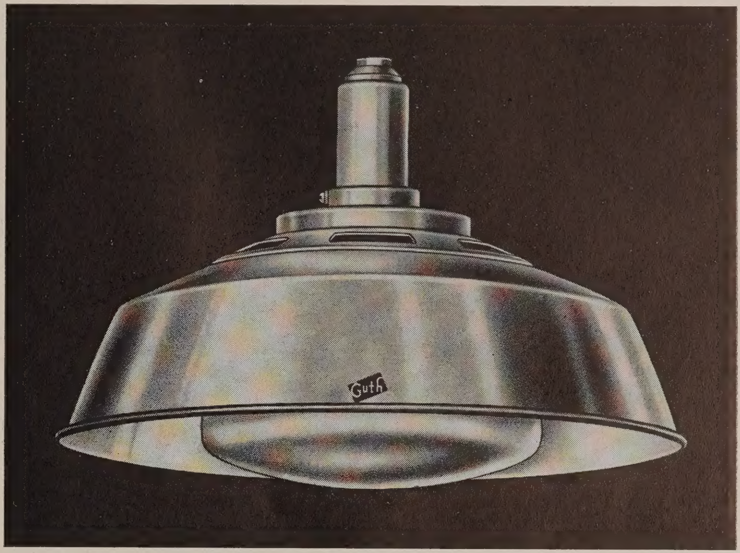
GUTH GLASS-STEEL DIFFUSER

UNITED STATES PATENT NOS. 1,951,406 and 1,939,260

With Safer and Better 4-Point Glass Suspension



LIGHT DISTRIBUTION
Diffused Downlight—Soft Uplight



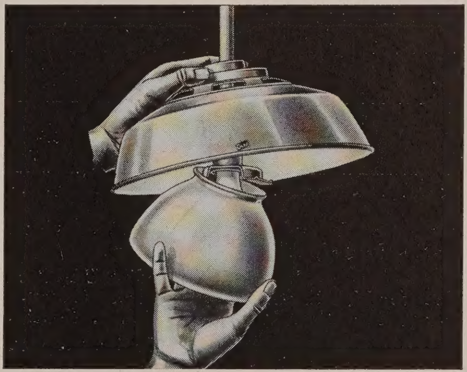
SUPER WHITE PORCELAIN ENAMEL REFLECTING SURFACE

GLASS-STEEL DIFFUSERS provide soft, evenly diffused illumination which insures rapid visual response. White-Opal glass globe diffuses the light-rays to minimize Reflected Glare from the seeing-task; the deep porcelain reflector comfortably shields against Direct Glare. Apertures in reflector top (Patented) permit upward light to produce soft ceiling-illumination thereby lessening "light-and-dark" room-contrasts, also shadows. GLASS-STEEL Diffusers deliver "smoother" Incandescent Illumination.

GUTH features include a "3-Coat" Super-White Reflecting Surface electrically fired-on at 1600° F. GLASS-STEEL'S patented glass-suspension-device is *different*—is safer and better! See to left below for full description.

SAFER 4-POINT GLASS SUSPENSION

Utilizing the Patented BDHIC Safety-Holder principle, GLASS-STEEL'S globe is suspended by positive action from 4-Points. No set-screws against the glass, no wire springs, no compression or tension to break the globe. Reflector is slightly lifted, globe is tilted and removed. Reflector cannot pass the BDHIC holder — and is held rigid by one set-screw at socket-cover.



SPECIFICATIONS

GLASS-STEEL Diffusers consist of Reflector, Opal-Glass Globe and Patented BDHIC 4-Point Safety Glass-Holder. Reflector and Holder have electrically fired-on Porcelain Enamel finish with "3-coat" Super-White reflecting surface of 79% R. F., or more, and Industrial Gray exterior. Lampholder is listed by Underwriters' Laboratories, Inc. Cast fittings are Udylite protected and are tapped ½″ standard (or ¾″ if specified). Shock-Absorbing-Lampholders to prolong lamp-life, also listed.

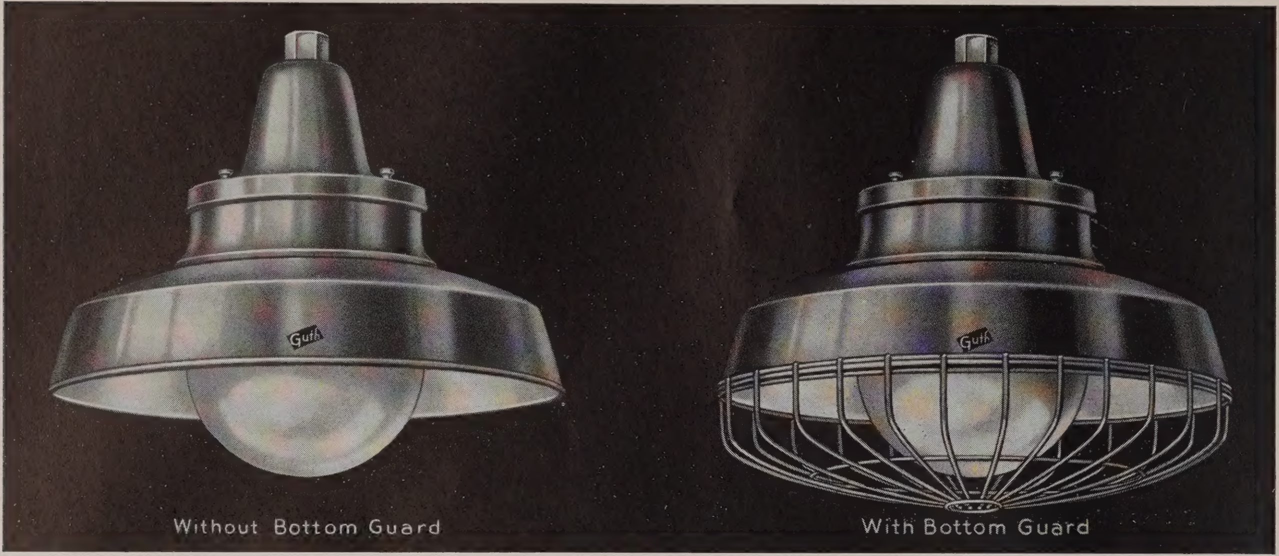
Lamp Wattage	Type Lamp	With Standard Keyless Lampholders	List Price	Keyless Shock Absorbing Lampholders	List Price	Refl. Dia.	Std. Pkg.	Shg. Wt. Std. Pkg.
150- 200	C	**AAA340**	**$11.70**	**SAS340**	**$11.85**	18″	4	50#
250	H	**AAA341**	**11.70**	**SAS341**	**11.85**	18″	4	65#
300- 500	C	**AAA342**	**16.25**	**SAS342**	**16.40**	20″	4	65#
750-1000	C	**AAA343**	**24.00**	**SAS343**	**24.15**	24″	2	75#
400	H	**AAA344**	**24.00**	**SAS344**	**24.15**	24″	2	75#

NOTES: Type "C" lamps are Incandescent (Filament); type "H" are Mercury-Vapor lamps. Fittings are tapped ½″ standard; ¾″ if specified. Prices are less wire and lamps. Add 10% for quantities less than standard packages. All prices are F. O. B. St. Louis with full-freight allowed on single-lot 100# shipments to U. S. continent destinations east of the Rockies, beyond which customer pays difference in freight.

Edwin F. Guth Company
Lighting Equipment

Guth VAPOR-PROOF REFLECTOR UNITS

With or Without Galvanized Steel Bottom Guard


Without Bottom Guard
With Bottom Guard

SUPER WHITE PORCELAIN ENAMELED REFLECTOR

GUTH HEAVY-DUTY VAPOR-PROOF UNITS are rigidly constructed and provide excellent lighting efficiency. These units are suitable for use in locations exposed to moisture or non-combustible dust. In addition, these units are weather-proof. Glass globe protects against breakage of the lamp so that the units may be used to avoid spoilage of food from broken glass of lamps.

The lamp is enclosed in a heavy glass screw-globe. An asbestos gasket between the hood and the globe seals the lamp and insures tight enclosure. Wireway entrance is also sealed by an asbestos gasket.

Entire reflector and hood are Porcelain Enameled steel. A separate inner ring of steel with screw-neck engages the glass globe. Asbestos gasket seals joints at meeting of the copper and porcelain enameled steel, and also provides cushion for edges of the glass globe. Complete unit with bottom guard protecting glass globe is also listed.

Lamp Wattage	Cat. No. Less Guard	List Price	Cat. No. With Guard	List Price	Refl. Dia.	Shg. Wt. Ea.*
75-100	**AAA345**	**$ 7.50**	**AGU345**	**$11.00**	10″	7#
150-200	**AAA346**	**10.50**	**AGU346**	**14.50**	13″	9#
300-500	**AAA347**	**13.50**	**AGU347**	**17.50**	16″	11#

*Add 2 pounds to shipping weight when unit with Bottom Guard is ordered.

SPECIFICATIONS: Socket-Cover and reflector are formed of heavy gauge steel and finished "3-coat" Porcelain Enamel, White inside and Industrial Gray outside.

GLASS ENCLOSING GLOBES are crystal-clear for high lighting efficiency. Globes have screw-neck which screw into threaded steel ring.

ASBESTOS GASKETS seal joints between reflector and socket-cover, also between conduit fitting and socket-cover.

SOCKETS are Underwriters' listed and are keyless, heavy-duty porcelain. When specified, at 15c list additional to fixture price, Shock-Absorbing Sockets can be furnished. To order same, suffix fixture number with SAS. Wire and lamps are not included in listed prices.

BOTTOM GUARD on units AGU345-347 fit reflector edges which are beaded. Guards are heavy-gauge steel wire with electrically welded joints. Finished Bright Tin after welding.

FITTINGS are tapped ½″ standard, or ¾″ if specified at no additional cost.

FREIGHT ALLOWED: Prices listed include full-freight allowance on 100# single lot shipments to U. S. Continent destinations east of the Rockies, beyond which customer pays difference in freight from Denver on west.

The Edwin F. Guth Company
"*Leaders In Lighting Since 1902*"
2615 Washington Avenue St. Louis, Mo.

GENERAL INFORMATION

ILLUMINATING ENGINEERING SERVICES . . .
Experienced engineers and designers will submit without obligation complete lighting analysis and recommendations for your individual lighting problem. Send us rough sketch showing area dimensions, ceiling height, location of existing outlets and mention type of lighting now employed, also your preference of new Luminaires and we'll send complete data for your consideration.

DISCONTINUED MODELS . . .
Catalog No. 40 lists our up-to-date Luminaires and Reflectors for Types F & C lamps. Items not shown here have been discontinued, however, many such items can be obtained at prices which depend on quantity involved and availability of materials.

IMPORTANT . . .
All prices, specifications and listings are subject to change without notice. Prices on Fluorescent items include fixtures, packed complete, F. O. B. St. Louis, Missouri, and include Full-Freight Allowance on Single-Lot 100-lb. shipments to the U. S. A., excluding non-contiguous territory. Prices for Incandescent items are F. O. B. St. Louis—No Freight Allowed. Lamps are not included in prices listed. Orders will be entered upon their arrival at our general office, and as entered will be manufactured and shipped if necessary materials and labor are available to us. We do not, however, assume any responsibility for incomplete execution of orders.

DAMAGES SUSTAINED IN TRANSIT . . .
Our packing is regularly inspected and approved by transportation authorities, who must accept responsibility for damages sustained in transit due to improper handling, whether damage is apparent or of a concealed nature, and providing claims are properly introduced and supported. We shall be glad to assist when called upon.

HOW SHIPPED . . .
Listed prices for Fluorescent Lamp Luminaires include fixtures wired complete; Incandescent lamp fixture prices include sockets and wire but fixtures are not wired. Fluorescent equipment is available UNWIRED, if desired, with all necessary accessories in place, but wiring connections not made. Unwired Fluorescent prices same as wired prices.

BALLAST POSITION . . .
Ballasts in channel may be in one of several positions. We do not guarantee positioning of ballasts unless order specifies particular location.

FLUORESCENT ACCESSORIES . . .
Lampholders, starters and ballasts furnished by us are what we consider the finest available. We test equipment (see page 4) before fixtures are packed, and recommend rechecking at warehouse before fixtures are delivered to the job. Any defective Starters or Ballasts will be replaced by us F. O. B. St. Louis within 90-days after equipment is shipped from here providing they have been properly installed on correct Line Voltage under normal conditions. This guarantee does not apply if the Starter is allowed to remain in the circuit with a Lamp which has failed or one which will not start. Defective accessories may be exchanged at many points throughout the country where our accessory manufacturers maintain warehouses (full information upon request). We pass-on to our customers the same guarantee on accessories that our suppliers give to us—we, like they, are unable to stand any labor or transportation charges in connection with the exchange of accessories. In cases where extraordinary expenses must be incurred, we must be consulted, and concur, before work is started, else we definitely will not accept any chargebacks.

RETURNED EQUIPMENT . . .
If for any reason equipment is to be returned, please write in advance for permission; when granted, Return Approval Labels will be furnished to apply to outside of cartons so these packages will be promptly accepted by our Receiving Department.

HELPFUL FLUORESCENT DATA

FLUORESCENT LAMP — ITS LIFE . . .
An electric arc passing through Mercury Vapor produces ultraviolet rays, which activate phosphors coated on the inside of the lamp to produce efficient visible light-rays. Leading lamp manufacturers guarantee 2500-hours burning for average performance on groups of lamps in the popular sizes.

LUMEN OUTPUT . . .
During a lamps first 100-hours operation, light-output decreases nearly 10%; thereafter, output decreases slowly until at end of the lamp's rated life, output is approximately 85% of rated lumen output (which is the output after first 100-hours burning of the lamp).

ACCESSORIES NECESSARY . . .
Like all electric discharge arc sources, Fluorescent lamps require ballast (reactance) to "police" the flow of current. Prices listed in this catalog include necessary accessories for lamp operation on 110-125 volt, 60-cycle A. C.

CURRENT SUPPLY . . .
Fluorescent lamp operation is best suited for 110-125 volt, 60-cycle, Alternating Current. The 30-, 40- and 100-watt lamps operate satisfactory on 199-216 and 220-250 volt, 60-cycle, A. C. and accessories are available; prices on request. Operation on 50-cycle is practical although flicker is noticeable; operation on 25-cycle is impractical. Direct-Current is not recommended, however, it is possible to operate 15- and 20-watt lamps on 110-volt D. C., and 40-watt lamps on 220-volt D. C.; further information on request.

CHECK LIST

For Fluorescent Lamp Troubles

1. Be sure Voltage is available; also that there are no open circuits.
2. Check Lamp; place it in another fixture which is known to be operating O. K.
3. Check Starter by placing it in another fixture. If lamp glows at each end but arc is not struck, Starter should be replaced else it will burn out the lamp.
4. Check Lamp Contact by twisting gently in lampholder with current on. If this is the cause, lampholder should be replaced.
5. Low Line-Voltage may be giving the trouble, so a Volt Meter should be used.
6. If all the above check satisfactorily, the Ballast is probably the cause of trouble. It can be checked for an open-circuit by means of a bell-ringer or similar device.

POWER FACTORS . . .
Low-Power-Factor may be briefly explained as "wattage" that does not show on the meter, yet requires wire of greater load-carrying capacity, and larger generating equipment. All GUTH Luminaires include High-Power-Factor which means full utilization of the wiring system. In many states a premium on the electric bill must be paid unless High-Power-Factor is utilized.

FLICKER . . .
Flicker or stroboscopic effects can be minimized by use of the Tulamp ballast or use of three single-lamp ballasts connected on separate phases of a three-phase system.

RADIO INTERFERENCE . . .
Fluorescent lamps may effect radio interference. In most cases this can be minimized or eliminated by (1) providing a good "ground" for fixture and radio, (2) moving aerial proper out of bulb and line radiation range, (3) use of grounded "filter" to eliminate line feed-back. Additional information can be had upon request.

AIR TEMPERATURE AND DRAFT . . .
Lamps operate at highest efficiency at normal room temperatures of 70° to 80° F. Exposed lamps at 32° F. temperature are 65% efficient. Drafts will directly affect lamp efficiency by as much as 20 to 25%. See page 20 for more information on this subject.

LESS HEAT — MORE LIGHT . . .
Fluorescent lamps are cooler light sources, producing 75% less radiant heat for equal light because a larger proportion of their wattage is turned into light (than other type lamps).

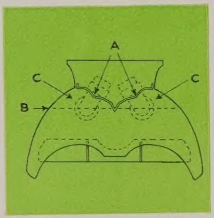
GUTH FLUORESCENT

"Leaders In Lighting Since 1902"

When buying lighting equipment, consider the manufacturer, his reputation, his dependability, his product. We, here at GUTH, offer a quality line of equipment, *engineered* for maximum illumination, *styled* to modern trends, and *built stronger to serve longer*. Millions of Guth Luminaires have been sold since 1902 — and millions are serving their users efficiently and satisfactorily. Proud users throughout the Western Hemisphere are convinced that "GUTH BUILDS DEPENDABLE LIGHTING EQUIPMENT"!

ENGINEERING AND DESIGN . . .

Guth Luminaires are not just "holders for lamps"—they provide "Illumination." Illumination is the function our engineers and designers develop into Guth Luminaires. The many lighting problems that have been solved upon our boards have provided our engineers with a wealth of experience upon which we base our designs to provide GUTH USERS with best devices to perform good illumination. Photometric curves, efficiency computations and brightness factors are carefully tabulated for determination of Guth Luminaire performance.



To left is illustrated cross-section of Guth Futurliter. Observe careful thought and engineering worked into this design. The "V" humps (marked A) behind each lamp, and design of reflector to center horizontal (marked B) of the lamps insure minimum of "light pocketing" and maximum light-output. Open areas (marked C) above each lamp provide upward illumination for cheerful ceiling effect. Here is high overall efficiency that will give users the ultimate in functional illumination. And more than this, construction allows "Eye-to-the-Future" increase of 45% more illumination if the user so chooses at a later date!

CONSTRUCTION . . .

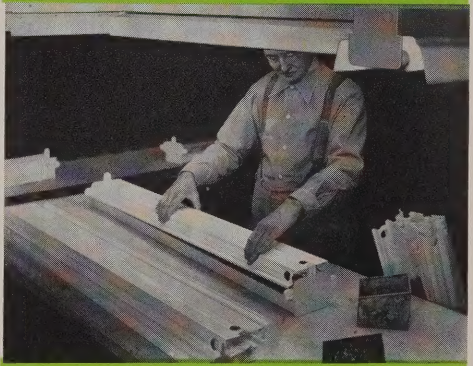
Dependability of Guth equipment, proven over 40 Progressive Years, is based on our use of heavy-gauge metals formed to die-dimensions, tapped with jig-accuracy, finished with best available materials on properly cleaned surfaces, assembled and tested before shipping, and packed in proper containers. All Guth Luminaires are built in accordance with the strict requirements of Underwriters' Laboratories, Inc. Quality construction is maintained by experienced and constant supervision, and our job doesn't stop right here—*we stand behind each and every Luminaire shipped from our plant.*

"QUALITY CONTROL"

In order that our customers may be assured of near trouble-free Fluorescent Luminaires, our line of inspection is rigid and important. Below are a few important phases through which Luminaires must pass on their way to our shipping department.

Photo shows electrician inserting lamps for test. Lamps must burn individually during this test. Lamps must start and operate normally under test at 107 volts. Slow Starter Switches are replaced with active Starters. Underwriters' Laboratories Label is applied here.

Next, an experienced electrician double-checks wiring. Wires are checked for abrasions. Then a 50,000 ohm Magneto is "hooked-on" to check against "shorts"—if the bell rings—back the fixture goes to the "trouble bench." If O. K., final Approved Inspection Label is applied.

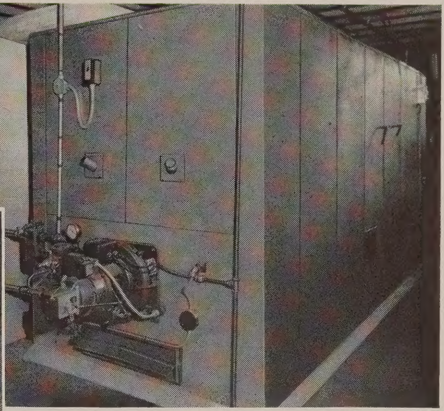


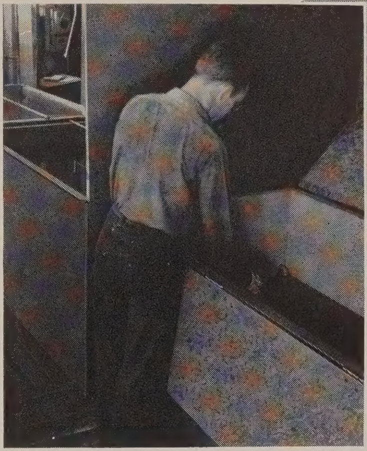
After wiring is O. K.'d, fixture passes on belt to the final inspector. Finish is checked under 250 foot-candle illumination. A scratched finish sends fixture back—is unwired and refinished. Reflector is inserted—then fixture moves to the packing bench where specific-sized cartons carefully house the unit for shipping. Then, down the chute to the Stock Room, and finally to the Shipping Department. Another first-class fixture, checked carefully, packed right, is shipped away.

Guth "300° WHITE" REFLECTORS

Superior Finish Insures High Efficiency and Lasting Satisfaction

Believers in efficient, lasting reflecting surfaces, Guth has always pioneered developments in this field. Back in 1916 the first electrically-heated Porcelain Enameling Furnace ever built was installed in our plant to produce a cleaner, whiter reflecting surface for our fixtures. In 1933, with the advent of the ALZAK process for aluminum metal, we were one of the very first to install the expensive equipment necessary for this fine reflector. Preparations for National Defense have curtailed our exclusive use of aluminum for reflectors, so we concentrated on developing a finish that would be least affected by National Defense — yet would be a quality finish. We have installed all necessary equipment to make the best possible high-baked enamel finish. "300° WHITE" is our answer — here's a finish that is highly efficient, snow-white — a hard, clean surface.





● Photo above shows Power-Unit for maintaining 300° uniform heat used for baking on "300° WHITE." "Indirect Draft" ducts force-in the heated air from 75% of the large oven's ceiling. Ovens are vacuum cleaned at regular intervals.

Photo to left shows section of "DeGreasing" and Electric Plating Department. Grease and dirt are removed by chemical vaporization. Then steel is electroplated for rust protection.

KNOWLEDGE BEHIND "300° WHITE"

Modern laboratories have developed the art of high-baked enameling to an all-time high. "300° WHITE" was "born" with all this technical information at our fingertips — and we didn't stop at costs to install the best in high-baked enamel equipment.

"300° WHITE" has an 88% reflection factor .It is a hard clean finish that does not chip, peel, check or tarnish. Tests illustrate further that "300° WHITE," as applied to Guth engineered reflectors, affords the ultimate in light-output efficiency.

PREPARATION . . .

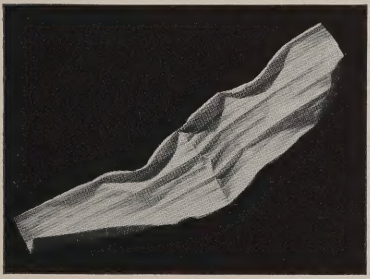
After the steel has been formed and punched to its final shape, it comes to our Cleaning Department. We do not try to clean it by simply dipping it in acid or alkali baths. It is placed in a large "De Greaser" where chemical vaporization removes every particle of grease and dirt — and when it emerges, it looks like natural aluminum in brightness. This clean steel is next submerged into electroplating tanks where it is coated for protection against rust.

APPLICATION . . .

Clean plated steel next moves to our Enameling Department where fine Nozzled Applicators under 250 foot-candles Illumination coat the steel with our special formula enamel. Out of one booth and into another brightly lighted one, reflectors are recoated for uniform thickness and heavier coating. Experienced operators are careful to apply proper thicknesses. Enamel is regularly checked from each drum. Applicators are thoroughly cleaned each 4 hours.

BAKING . . .

The Baking Process has been described in part under photograph above. Clean forced-air comes in from 75% of the oven's ceiling through special "Indirect Draft" inlets. Direct heated air does not touch the work. Filters further screen any dust which may have crept into the furnace air. The Baking Ovens are vacuum-cleaned at regular intervals to insure cleanliness. As reflectors emerge from the drying ovens, they are carefully inspected under 250-foot-candles illumination. Rejects are returned, the "300° WHITE" burned off entirely and the reflector reprocessed exactly as described above. We say in all confidence — "300° WHITE" is hard to beat for quality!



"300° WHITE" Stands These Tests!

Two good examples of finish excellence are shown above. Photo to left shows a Guth reflector that has been dropped, that has been hammered, that has been bent in two—yet "300° WHITE" adheres to the base metal. Your fixture won't get this hard treatment but be sure it will stand similar tests — you will get longer fixture-life and efficiency. In photo to right, two Bicycle Tubes finished "300° WHITE" are struck together with every bit of human strength a man can give. Yet "300° WHITE" won't chip off! Buy Guth "300° WHITE" for lifetime service!

NATIONAL DEFENSE

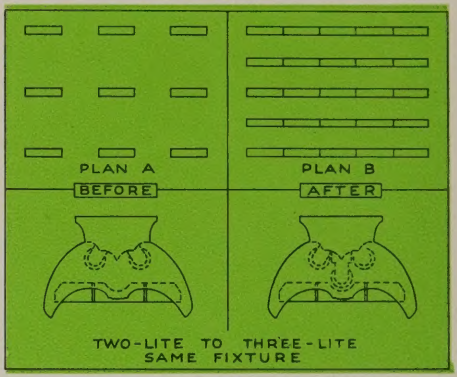
Today, your first duty, and ours, is National Defense. However, we will endeavor to continue to meet all delivery dates requested and give you our full cooperation. If some of our materials are needed for National Defense, we agree to furnish the best available materials and/or designs for practical production to fulfill your order.

The Edwin F. Guth Co.

Guth FUTURLITER . . . "EYE-TO-THE-FUTURE" FLUORESCENT . .

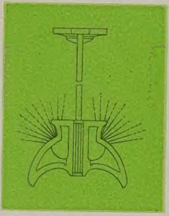
TRADE MARK REGISTERED—PATENTS PENDING

The FUTURLITER Fluorescent Lighting System consists of luminaires which may be installed as Individual units or in Continuous-Runs (one fixture connected to another end-to-end). Increased illumination which *your business* may demand at later dates, is anticipated in FUTURLITER construction and also can be anticipated by predetermined or planned layout. In sketches to right, a two-lite and three-lite cross-section of FUTURLITER is shown. With installation of two-lite units, a 45% light increase can be obtained with FUTURLITER by merely adding new Ballast and Lampholders for the third lamp — use same fixture. Or, by predetermined layout, refer to Plans A and B (above). In Plan A, 9 Sections are originally installed. If increased lighting is desired later, 2 Sections per row and 2 more *whole rows* can be installed (see Plan B). FUTURLITER is a *permanent* lighting system with a *flexible* foot-candle capacity.

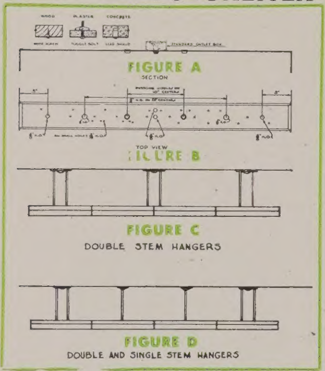


EASY INSTALLATION—Ceiling Light

Whether suspended on hangers 6″ or 6′ from the ceiling, FUTURLITER provides direct ceiling light. Not only does this insure cheerful overall lighting effect, but further makes FUTURLITER adaptable to various ceiling heights and allows for easier installation as hanger suspension is easiest to install. Only one ceiling hole per 4′ section is necessary.



FUTURLITER MOUNTINGS



CEILING MOUNTINGS: Figures A and B, to left, show cross-section and top-view of FUTURLITER'S channel. Knockouts and mounting holes for numerous variations of mounting are shown in Figure B. At top of Figure A are shown three methods of Direct-To-Ceiling mounting. To left is suggested Wood-Screws into Wood-Ceiling; secondly, Toggle-Bolts into Plaster Ceiling; and third, Lead-Shield bolts into Concrete Ceiling. Two bolts or screws, one at each end of unit, are recommended for one 4′ fixture length.

HANGER MOUNTINGS: Upward light afforded by FUTURLITER, insures cheery ceiling illumination when FUTURLITERS are suspended on hangers. Figures C and D show two-types of hanger arrangement. Figure C shows use of all M1861 Double-Stem hangers; swedged-in nipples on 10″ centers, and knockouts 5″ from each end are provided in each channel. Figure D shows M1861 Double-Stem hanger used on end-units of runs, and M350 Single-Stem hanger used on units between end-units. Only *one ceiling hole* per 4′ length is needed for suspension installations; also assembly and hanging is easier. More even alignment is possible, particularly on sloping or uneven ceilings.

FUTURLITERS FOR OFFICES

Efficient shielded illumination by GUTH FUTURLITERS has been engineered for the *seeing-tasks* in the Accounting Offices of Indiana Service Corp., Ft. Wayne, Indiana. FUTURLITERS provide 55 F. C. of quality light in service and utilize only 3.4 watts-per-square-foot!

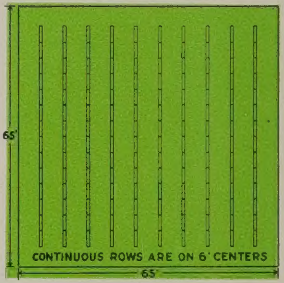
FUTURLITERS FOR STORES

GUTH FUTURLITERS in the Men's Shop of Louis Appel Co., Louisville, Kentucky, provide *more-natural* buying and selling light. *Modern Design* of FUTURLITERS means more sales. Average illumination of 35 F. C. is maintained to facilitate color and texture discrimination! Installation uses 2 watts-per-square-foot.

LAYOUT-AND-MOUNTING HEIGHT DATA

FUTURLITERS with Eggcrate Shielding provide efficient Downlight plus 17.5% upward light; this ideal combination lighting produces cheerful energizing atmospheres.

The Light-Distribution of this luminaire suggests for most uniform illumination, that the spacing (distance between units or rows) be approximately ¾ times the Mounting Height (distance from floor to bottom of luminaire) when FUTURLITERS are installed on average ceilings. For high ceilings, this spacing can equal the mounting height for uniform illumination results. FUTURLITERS can be installed as Individual units or in Continuous-Runs.



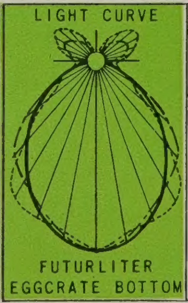
To right is a layout for an office 65′ x 65′ with an 11′ ceiling. FUTURLITERS are dropped on stem hangers to 10′ mounting height; distance between rows is 6′0″, with 2 40-watt White lamps in each 4′ section (3.4 watts, including ballast, per sq. ft.); 60 foot-candles of illumination is maintained in service. At future date, this illumination can be stepped up to 85 foot-candles (maintained), by installing a third row of lamps in the same fixtures. Flexible foot-candles in a permanent Lighting System.

ESTIMATED ILLUMINATION DATA

This table, based on various wattages (including Ballast wattage), per square foot, on average (10′ to 11′6″) mounting heights and with normal depreciation, may be of assistance in quick illumination estimates for FUTURLITER with Eggcrate Shielding.

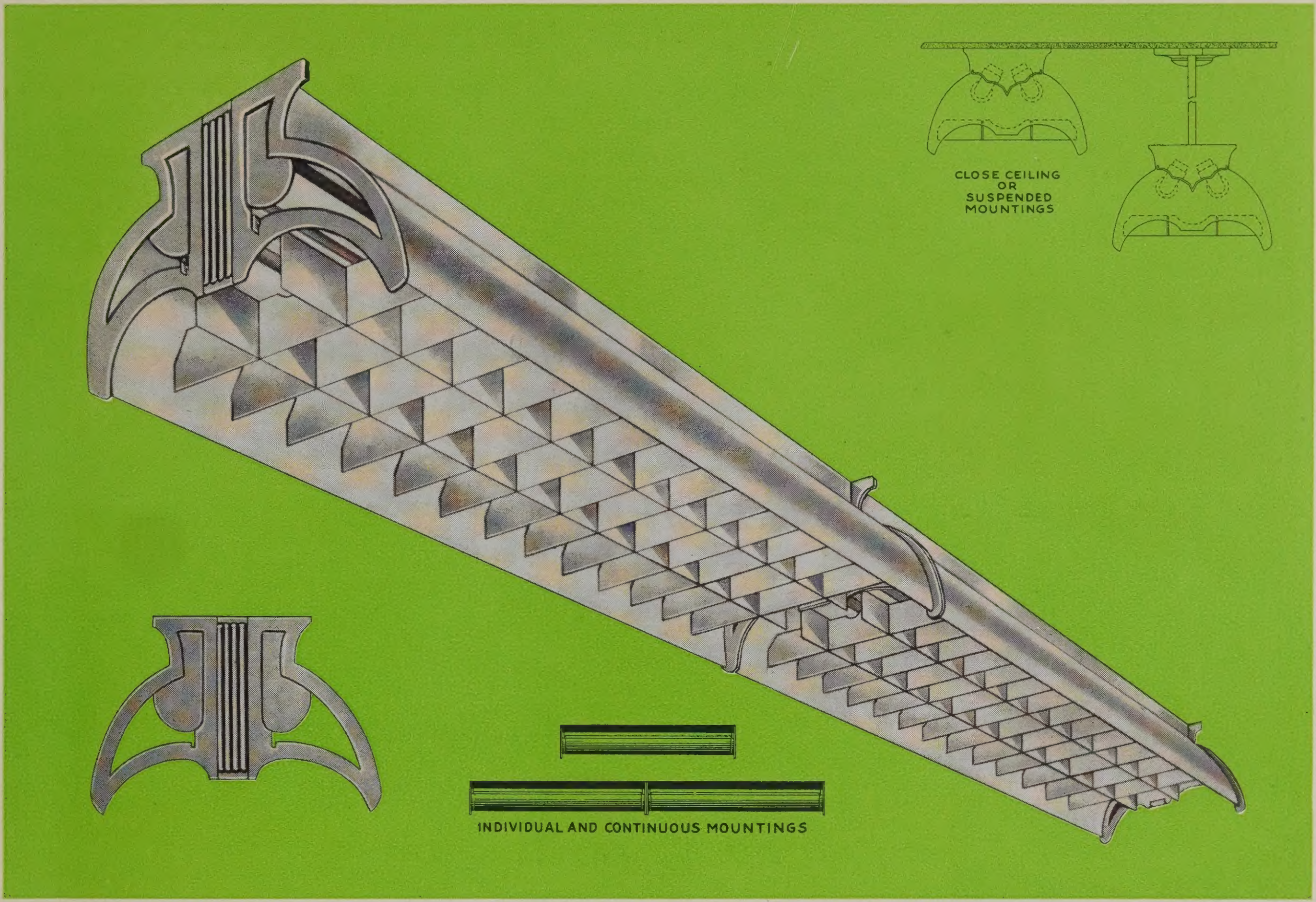
		Foot-Candles With White Lamps		
Area	Dimensions	One Watt Per Sq. Ft.	Two Watts Per Sq. Ft.	Three Watts Per Sq. Ft.
Small	10′ x 15′	6- 9	13-18	23-27
Average	20′ x 40′	12-15	25-30	40-45
Large	60′ x 150′	15-18	32-36	45-50

COEFFICIENTS OF UTILIZATION



Ceiling	75%			50%		
Room Index \ Walls	50%	30%	10%	50%	30%	10%
J	.28	.25	.22	.27	.23	.21
I	.36	.32	.30	.33	.30	.28
H	.39	.35	.33	.36	.33	.31
G	.41	.38	.36	.39	.37	.35
F	.44	.41	.38	.41	.39	.37
E	.48	.45	.43	.45	.42	.40
D	.51	.49	.47	.48	.46	.44
C	.53	.51	.48	.49	.47	.45
B	.56	.54	.52	.52	.50	.48
A	.57	.55	.53	.57	.51	.50

NOTES: For 3 40-watt lamp FUTURLITERS, multiply foot-candle intensity by 1.45. Normal maintenance-factor (with eggcrate bottom) is .75 for offices, stores, etc.


CLOSE CEILING OR SUSPENDED MOUNTINGS
INDIVIDUAL AND CONTINUOUS MOUNTINGS

LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE FUTURLITER

1-2505
5-2104

TRADE MARK REGISTERED—PATENTS PENDING

FUTURLITER CONSTRUCTION

Each Futurliter is 48⅜″ long O. A.; assembled complete with two ends and side-baffles attached to fixture body; and packed in unit cartons. Units may be mounted individually or in continuous-runs; when installed in runs, the Aluminum Fluting attached to ends is removed at the job for abutting sections flush against each other. Each Flute is ⅛″ thick so that ¼″ space is saved in butting units end-to-end. When Fluting is removed, a ⅞″ knockout is accessible for running wiring continuously. Also, each end has 2-small holes for locking fixtures together with Stove-Bolts (bolts not furnished).

Heavy gauge steel channels house accessories and serve as continuous wireways. Reflectors are removable for access to innards. Entire fixture except Flutes is finished "300° WHITE"; the Flutes are Polished Metal.

The 2 40-watt units are wired with 95-100% High-Power-Factor Tulamp ballast with built-in Compensator, 90° rotating-lock White Sockets and Starter Switches. The 2 40-watt sections have provisions for adding a third 40-watt lamp at any time by merely adding ballast and lampholders. The 3 40-watt sections are wired complete with 90% High-Power-Factor Single Lamp Ballast in addition to the Tulamp Ballast (also listed wired with all Tulamp ballasts). Listed by Underwriters' Laboratories, Inc.

FUTURLITER—with Eggcrate Louvres (see page 9 for Open Bottom Type) provides shielded Fluorescent illumination with comfort, coolness and quantity of light. Engineered for efficient lighting in Offices, Stores and School Rooms, FUTURLITER brings you "Tomorrow's Lighting Today"—with an EYE-TO-THE-FUTURE in anticipation of increased illumination that may be desired at later dates.

FUTURLITER—offers easy maintenance due to minimum of dust-collecting areas. Approximate 45° lamp-shielding at angle normal to the lamps (on 2 40-watt units) and 30° shielding at parallel angle. FUTURLITER'S Eggcrate Louvres are easily removed and reinserted by means of "Step-Locks"—no screws, latches, etc. Complete air-circulation through the luminaire insures maximum lamp-life. For mounting individually or in continuous-runs, for attachment direct-to ceiling or suspended-from same, requiring only one wiring outlet per unit or entire run, FUTURLITER is a flexible new type lighting system.

FUTURLITER—With Eggcrate Shielding

Cat. No.	Wired For	Lgth.*	Width	Depth	Shp. Wt.	List Price	Code
M2500	2-40W	48⅜″	12⅛″	8⅛″	39#	**$33.50**	PABAM
M2501	3-40W	48⅜″	12⅛″	8⅛″	43#	**42.50**	PABOR
M2502†	6-40W	96¾″	12⅛″	8⅛″	86#	**80.00**	PAEJK

*Lengths include ⅛″ Flutes on each end. When units are used end-to-end, Flutes are removed at job for flush abutting, and for access to the wiring knockout. Removal of Flutes saves ¼″ at each abuttment.

†M2502 is actually two 4-foot units packed in 2 cartons. One 4′ section has 2 Tulamp ballasts, the other, one Tulamp ballast; wiring connection of third lamp in one section to be made on job.

NOTES: Above prices do not include hangers. Guth M1861 Double-Stem Hanger lists at $4.50 (for longer lengths than 25″, add 80c list per foot or fraction). Guth M350 Single-Stem Hanger lists at $2.50 (for longer lengths than 25″, add 60c list per foot or fraction).

Other Type FUTURLITERS are listed on Pages 8 and 9

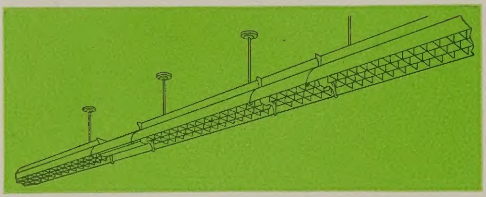
Guth **FUTURLITER** . . . "EYE-TO-THE-FUTURE" FLUORESCENT

TRADE MARK REGISTERED—PATENTS PENDING

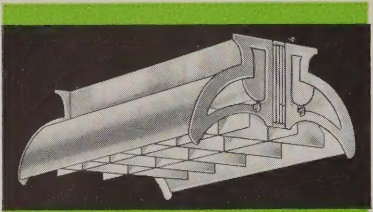
FUTURLITER AUXILIARY SECTIONS

For Filament and Germicidal Lamps . . . Also with GUTHFAN

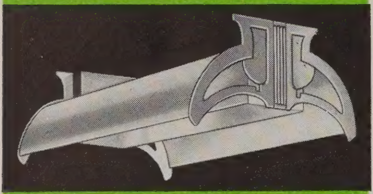
FUTURLITER'S EYE-TO-THE-FUTURE adaptability is not alone confined to increased illumination. Auxiliary Sections listed on this page offer three excellent features for installation with the lighting system. FILAMENT lamp sections bring truer color lighting for specific areas; sections for use with GERMICIDAL lamps (germ-killers) reduce Air-Borne bacteria for a more healthy air condition; and finally, sections with the famous GUTHFAN provide complete-cycle, air-circulation for more comfortable office areas.



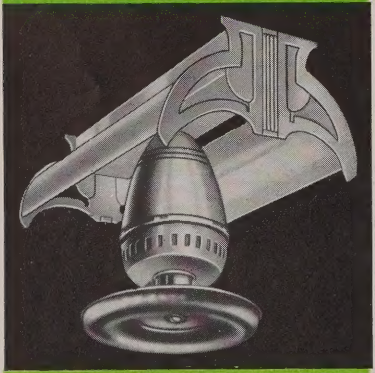
These Auxiliary Sections are built to same width and height dimensions as the Fluorescent lamp sections; and they "couple-on" with the Fluorescent sections to form LINES OF LIGHT, GOOD-COLOR, HEALTHIER and CIRCULATED AIR. To left is sketch showing the 4-foot Fluorescent sections "coupled-together" with 18″ Auxiliary Sections. Details for Auxiliary Sections below.



SECTION FOR FILAMENT LAMPS



SECTIONFOR GERMICIDAL LAMPS

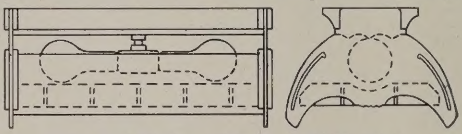


SECTION WITH GUTHFAN

FILAMENT LAMP SECTION

The M2515, Filament Lamp Section, is used in conjunction with FUTURLITER Fluorescent sections and is effective in providing combination Filament-Fluorescent Color-Values—for use in many Stores and Restaurants, over Soda-Fountains, Meat-Counters, etc. The M2515 is made to operate 2 100-watt Clear-Type Filament Lamps; furnished complete with Eggcrate Louvre to shield the lamps; is 18⅜″ long and has two ends which "tie-onto" Fluorescent Sections. Cross-section is at right.

M2515 (Code OZZOX) Lists at. **$15.00**
Shipping weight 10 pounds

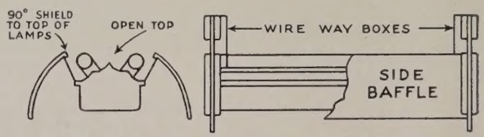


FILAMENT LAMP SECTION

GERMICIDAL LAMP SECTIONS

The Germicidal Lamp is a Germ-Killer. Its Ultra-Violet rays must be shielded from one's eyes. Guth M2516 Section is wired complete with Ballast and Starters to operate 2 15-watt Germicidal Lamps. One of these Sections properly installed in area of 750 cu. ft. produces a bacterial effectiveness equivalent to about 300 air changes per hour. For additional information on this subject refer to G. E. Folder No. Y-0174-R. M2516 should be installed with FUTURLITER Fluorescent sections using M1861 Double-Stem hangers dropped from 24″ to 36″ from the ceiling. The M2112 provides 90° lamp shielding (see Cross-Section to right), is 18⅜″ long and comes complete with ends for connections to Fluorescent sections.

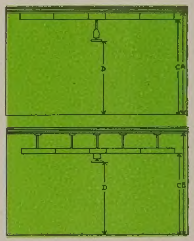
M2516 (Code OZZUX) Lists at. **$25.00**
Shipping weight 10 pounds



GERMICIDAL LAMP SECTION

GUTHFAN SECTION

The famous GUTHFAN with its patented, unique Complete-Cycle Air-Circulation, can be effectively used with Fluorescent FUTURLITER sections. GUTHFAN circulates the 7° to 10° cooler air found in the lower portion of the room. It picks up this cool air, draws it to the blade, and deflects it at a 45° downward and outward angle. The air above the blade is not circulated, therefore does not affect operation of Fluorescent lamps. M2517 Section is 18⅜″ long, with ends, fits into Fluorescent-run, is complete with 110-125 volts, 60 cycle, A. C. power-unit, aluminum finished motor cover, and Silvan finished blade. Special M2183 heavy duty Single Stem hanger should be used with each GUTHFAN section when suspended. M2183 lists at $4.00 (for longer length than 36″ add 80c list per foot or fraction). GUTHFAN blade should be 7′ from floor (See sketch to right.)



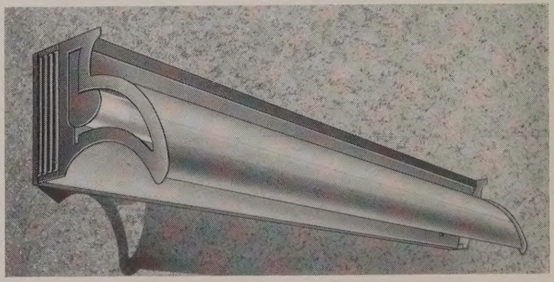
M2517 (Code OZWUV). Shipping weight 35 pounds. Lists at. **$84.50**

FUTURLITER COVE

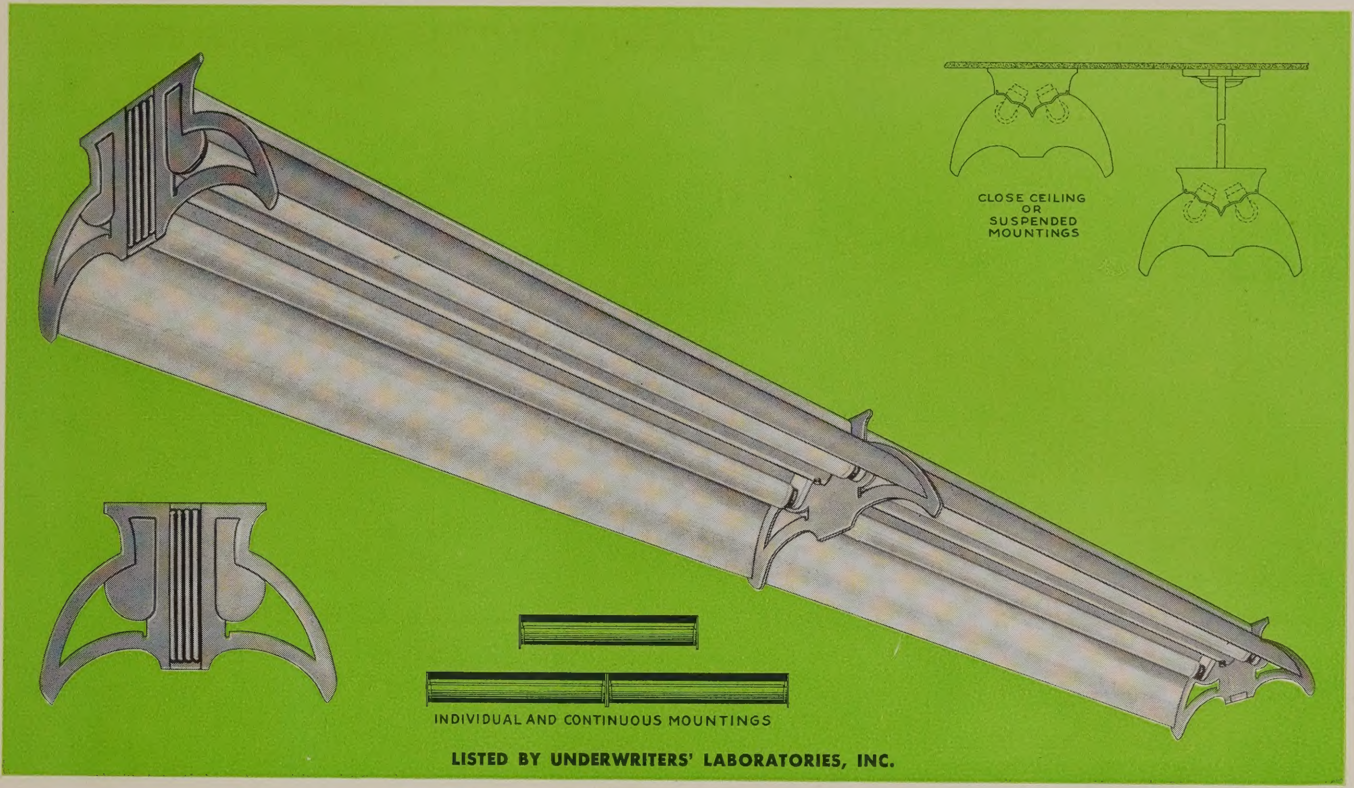
The FUTURLITER COVE provides general illumination with pleasing uplight when mounted on the wall either in corner between ceiling and wall, or further down the wall. The COVE may be used independently or for supplementary lighting with FUTURLITERS. This versatile fixture is for 1-40W lamp per 4′ section and for continuous or individual mountings.
The COVE is of similar design to the FUTURLITER and has stamped steel ends trimmed with Polished Fluting. K. O.'s in each end affords convenient joining with stove bolts in continuous runs, and with Fluting removed, a ⅞″ K. O. permits continuous wiring. The FUTURLITER COVE is finished "300° WHITE."

Cat. No.	Lamp Wtg.	Lgth.	Ext.	Depth	Shp. Wt.	List Price	Code
M2520	1-40W	48⅜″	7″	8⅛″	23#	**$23.00**	PAIRT
M2521	2-40W	96¾″	7″	8⅛″	45#	**41.00**	PEHIH

NOTE: When used continuously, the end Flutes are removed for flush abutting and access to wiring knockout. Each Flute is ⅛″ thick so each abuttment saves ¼″ space. The M2521 is actually 2-4 foot units packed in 2 cartons. One Tulamp Ballast operates 1-40 Watt Lamp in each unit; wiring connections for one lamp to be made on job.



. Appearance and Performance That Lasts . . . Open-Bottom Type


CLOSE CEILING OR SUSPENDED MOUNTINGS
INDIVIDUAL AND CONTINUOUS MOUNTINGS

LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE FUTURLITER

Open-Bottom type FUTURLITERS listed on this page, afford 27½° lamp-shielding at normal angles to the lamp (see Page 7 for Eggcrate-Shielded FUTURLITERS). This type is 80% efficient and renders 17½% upward light for soft ceiling illumination, plus strong downlight to the working-plane. Suitable for Stores and high-ceilinged Offices, the Open-Bottom types offer similar EYE-TO-THE-FUTURE lighting (see Page 6), as do the Eggcrate types. Can be mounted Individually or in Continuous Runs. Attached to the ceiling or suspended from same, FUTURLITER requires only one electric outlet per unit or entire run.

LAYOUT AND MOUNTING HEIGHT DATA

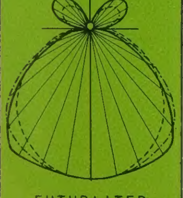
Light-distribution of Open-Type FUTURLITERS permits wider Spacing (distance between units or rows) than do Eggcrate Shielded Types (page 7). Spacing on average ceiling heights can equal the Mounting Height (distance from floor to bottom of fixture). For high ceilings, the spacing can be as much as one and one-quarter times the Mounting Height.

ESTIMATED ILLUMINATION DATA

The following table may be of assistance for quick estimating lighting results with Open-Bottom FUTURLITERS. Wattage includes Ballast consumption.

		Foot-Candles With White Lamps		
Area	Dimensions	One Watt/ Sq. Ft.	Two Watts/ Sq. Ft.	Three Watts/ Sq. Ft.
Small	10′ x 15′	8-11	17-22	30-35
Average	20′ x 40′	14-19	30-35	44-48
Large	60′ x 150′	18-23	35-40	55-60

COEFFICIENTS OF UTILIZATION

LIGHT CURVE	Ceiling	75%			50%		
	Walls / Room Index	50%	30%	10%	50%	30%	10%
 FUTURLITER OPEN BOTTOM	J	.33	.29	.25	.32	.28	.24
	I	.41	.37	.34	.39	.35	.32
	H	.45	.40	.38	.42	.39	.36
	G	.48	.44	.42	.45	.43	.41
	F	.50	.47	.44	.47	.45	.43
	E	.55	.52	.50	.52	.49	.47
	D	.59	.57	.54	.56	.53	.51
	C	.61	.58	.56	.57	.55	.52
	B	.64	.62	.59	.60	.58	.56
	A	.66	.63	.61	.62	.59	.58

NOTES: For 3 40-watt FUTURLITERS, multiply Foot-Candle Intensity by 1.45. Normal maintenance-factor for Open-Bottom FUTURLITER is .78.

FUTURLITER CONSTRUCTION

DESCRIPTION: FUTURLITERS listed on this page are of identical construction as those listed on page 7; only difference is omission of Eggcrate Louvres which can be used with these units at later date if desired (specify M2072 Eggcrate—List Price $6.00 when ordered 5 or more at one time, or $7.25 when ordered in smaller quantities).

FUTURLITERS are finished "300° WHITE" and have Polished ornamental End-Flutes. When FUTURLITERS are run in continuous arrangements, these Flutes are easily removed at the job for flush abuttment of the units. Holes in ends are used with Stove-Bolts for "tying" units together. Also a ⅞" knockout is uncovered when Flutes are removed, to provide a Continuous Wireway. One-quarter-inch space is saved at each joint when Flutes are removed.

FUTURLITERS—Open Bottom Types

Cat. No.	Wired For	Lgth.*	Width	Depth	Shp. Wt.	List Price	Code
M2505	2-40W	48⅜″	12⅛″	8⅛″	31#	**$27.50**	PACAN
M2506	3-40W	48⅜″	12⅛″	8⅛″	35#	**36.50**	PACOS
M2507†	6-40W	96¾″	12⅛″	8⅛″	70#	**68.00**	PAENP

*Lengths include ⅛″ Flutes on each end. When units are used end-to-end, Flutes are removed on job for flush abutting and access to wiring knockout. Removal of Flutes saves ¼″ at each abuttment.

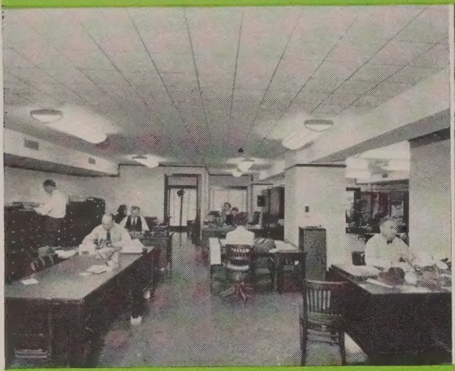
†M2507 is actually two 4-foot units packed in 2 cartons. One 4-foot unit has 2 Tulamp ballasts, the other, one Tulamp ballast; wiring connection of third lamp in one section to be made at job.

NOTES: Above prices do not include hangers. Guth M1861 Double Stem Hanger lists at $4.50 (for longer length than 25″, add $0.80 list per foot or fraction). Guth M350 Single Stem Hanger lists at $2.50 (for longer length than 25″ add $0.60 list per foot or fraction). See page 6 for further mounting details.

Guth EXCELUX FLUORESCENT . . . The Least Expensive Quality

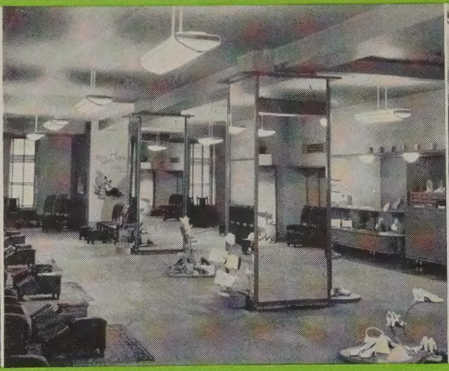
TRADE MARK REGISTERED—U. S. PATENT No. 129836—OTHERS PENDING

For Offices



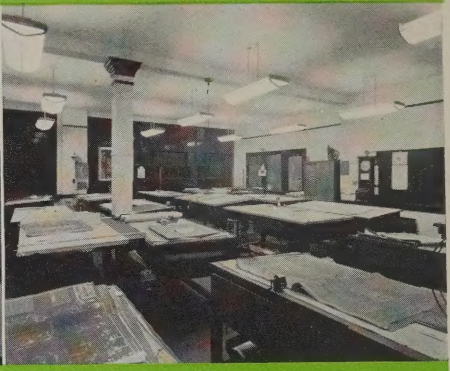
OFFICES of United Gas Company, Houston, Texas, with EXCELUX M2120 mounted directly to the 8′6″ ceiling, on 9′ x 9′ centers. Uniform illumination of 48 foot-candles is delivered at desk level. EXCELUX minimizes reflected glare off business-machine keys.

For Stores



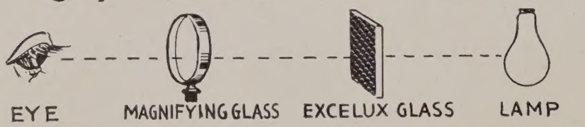
SALES AREA in Gude's Rose Shop, Los Angeles, Calif., uses EXCELUX for greater customer appeal, and "better-than-double" the illumination formerly obtained at the same wattage. EXCELUX' *modern design* means greater sales for the merchant.

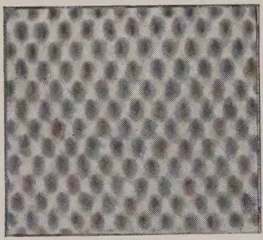
For Drafting Rooms



DRAFTING ROOM of the Jones & Laughlin Steel Co. at New Orleans uses EXCELUX on 10′ centers and 9′ mounting height for 35 foot-candles. Even intricate and faded blueprints are read easily and comfortably with EXCELUX diffused illumination.

Highly Efficient With Low-Brightness





EXCELUX GLASS

CLEAR GLASS

The Naked-Eye peering through a magnifying-glass into the Prismed-Glass EXCELUX shield, perceives that three-fourths of the total area is "in-shadow"—low-in-brightness. Nevertheless, EXCELUX glass has approximately the same high transmission as does crystal-glass, and is much more efficient than white-opal glass. See this amazing demonstration—ask the Guth representative in your section.

Layout Suggestions

EXCELUX is a semi-direct luminaire that permits Spacing (distance between units) to be three-quarter to one times the Mounting Height for uniform illumination results. Besides the "full-screen" downward lighting, EXCELUX'S upward light provides soft pleasant ceiling illumination. In offices, schools, etc., it is suggested that EXCELUX be installed so that length of luminaire be parallel with direction that people face — see end rather than full-length of luminaire for lowest brightnesses.

Estimated Illumination Data

Following table may assist in quick estimates for illumination with EXCELUX. Figures are with white lamps, 10′ to 10′6″ Mounting Height, and normal depreciation of .70.

		Foot-Candles With White Lamps		
Area	Size	2 Watts/ Sq. Ft.	3 Watts/ Sq. Ft.	4 Watts/ Sq. Ft.
Small	10′ x 15′	14-17	22-25	30-35
Average	20′ x 40′	19-23	27-30	40-45
Large	60′ x 150′	30-35	45-50	65-70

EXCELUX CONSTRUCTION

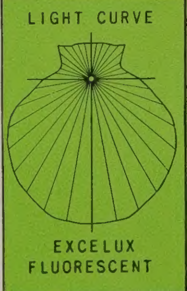
Utterly new in design, EXCELUX adds to the appearance of any interior. Diffusing shield is supported between ends by three satin-finished rods, and edge frames. Ends are translucent. Body size of all EXCELUX Luminaires is 50½ inches long by 15 inches wide by 6½ inches deep.

Accessory housing of heavy gauge steel is finished "300° WHITE" and is wired for 110-125 volt, 60-cycle, A. C., operation with High-Power-Factor Tulamp Ballasts, built-in Compensators, and with Starters and White 90° rotating lock sockets. Reflector is removable for access to innards.

Thumb-screw in one end releases fixture basin in EXCELUX'S exclusive easy servicing feature (see Page 11). The entire basin may be lifted out of this position for moving to the floor.

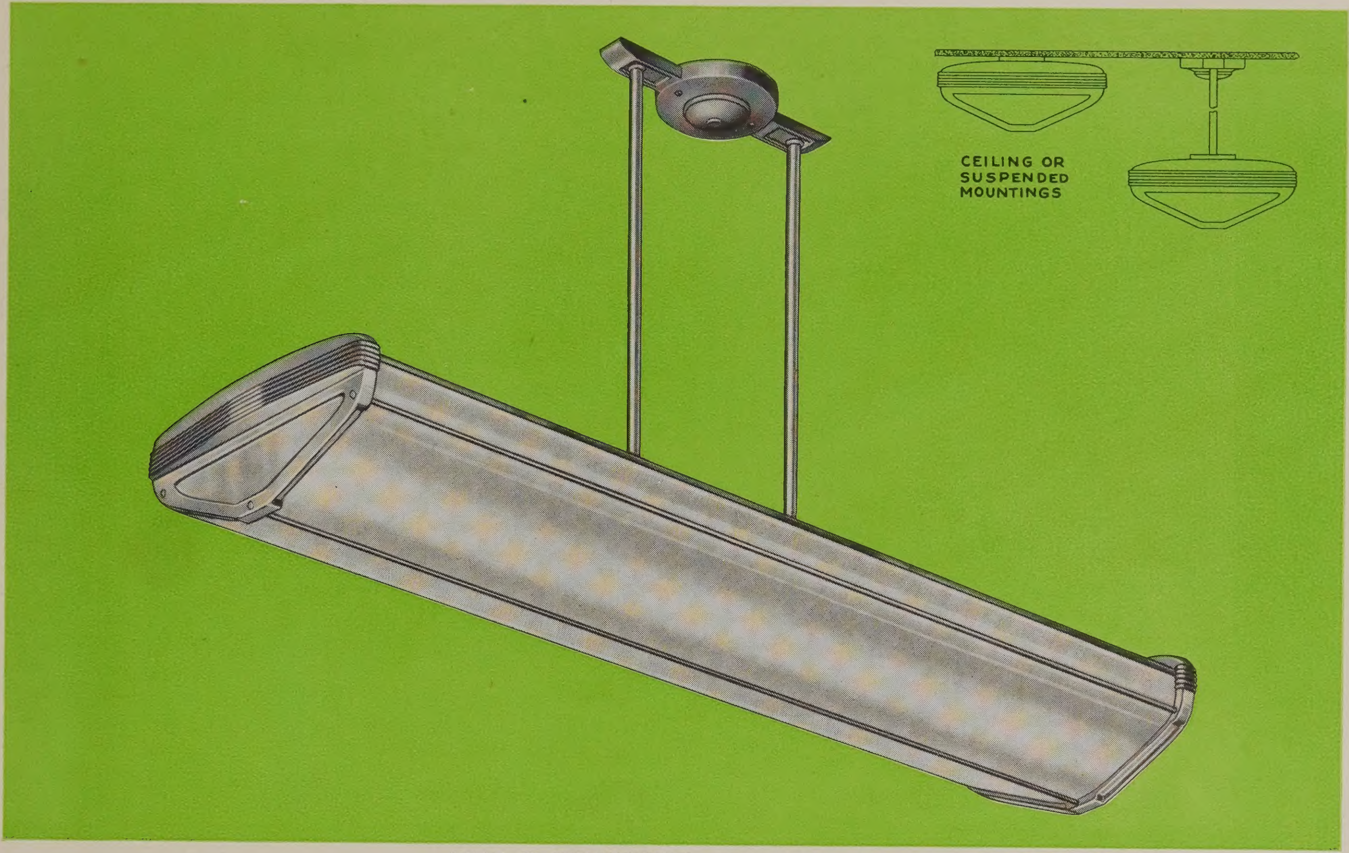
EXCELUX is made for suspended or ceiling mounting. Knockouts for hangers are on 10″ and 25″ centers. For close-ceiling mounting, EXCELUX'S simple construction and removable reflector makes this type installation practical and easy. Guth Hangers, when furnished, are self-aligning.

COEFFICIENTS OF UTILIZATION



Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.30	.27	.24	.29	.26	.23
I	.38	.34	.32	.35	.33	.29
H	.41	.37	.35	.38	.35	.34
G	.44	.41	.39	.40	.39	.37
F	.46	.43	.41	.43	.41	.39
E	.50	.47	.45	.47	.45	.42
D	.55	.52	.49	.52	.49	.46
C	.57	.54	.51	.54	.51	.48
B	.59	.58	.55	.56	.55	.52
A	.61	.59	.57	.57	.56	.55

NOTES—For 6-lite EXCELUX multiply intensities by 1.40.



LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE EXCELUX FLUORESCENT

TRADE MARK REGISTERED—U. S. PATENT No. 129836—OTHERS PENDING

EXCELUX of *Modern Design*, renders excellent Semi-Direct illumination with "Full-Screen" lamp diffusion through efficient Configurated Glass cover-shields. Designed for use in Offices, Stores and Schools, EXCELUX quality illumination insures minimum of direct and reflected glare, with efficient uniform lighting intensities.

EXCELUX accommodates 4 or 6-40-watt lamps, or with its EYE-TO-THE-FUTURE feature, can be obtained wired initially for four-lamp operation but constructed so that by adding accessories six-lamps can be operated in the same fixture at later date if desired.

SUSPENSION TYPES—With Hangers

Cat. No	Wired For	Drop*	Shp. Wt.	List†	Code
M2100	4-40	31½″	75#	**$64.50**	OYOHG
M2170	6-40	31½″	83#	**87.50**	PAFIT

Canopy pull switches list at **$1.50** each.
*For longer lengths, add **80c** list per foot or fraction thereof.

EYE-TO-THE-FUTURE EXCELUX

Luminaires listed below afford exclusive conversion feature to operate 50% more lamps (increase from 4 to 6 lamps) in the same fixture by merely adding accessories. This enables the user to increase the illumination at later date if desired.

EYE-TO-THE-FUTURE EXCELUX

SUSPENSION TYPES—With Hangers

Cat. No.	Wired For	Drop*	Shp. Wt.	List†	Code
M2102	4-40	31½″	76#	**$74.50**	PAEST

*For longer lengths, add **80c** list per foot or fraction thereof.
Pull switches list at **$1.50** each.

EYE-TO-THE-FUTURE EXCELUX

CLOSE CEILING TYPES—Less Hangers

Cat. No.	Wired For	Drop	Shp. Wt.	List†	Code
M2105	4-40	6½″	72#	**$70.00**	PAFAR

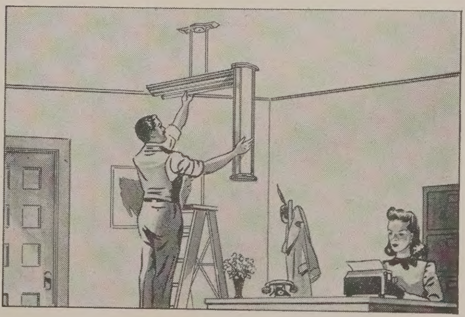
CLOSE CEILING TYPES—Less Hanger

Cat. No.	Wired For	Drop	Shp. Wt.	List†	Code
M2120	4-40	6½″	71#	**$60.00**	OYOLK
M2174	6-40	6½″	79#	**83.00**	PAFUW

†Prices listed on this page include the Glass Shield packed one to a carton. We can pack the Shields 4-to-a-Wood-Crate; if desired. Specify on order and deduct $1.30 List per fixture. Deduction only applies when 4 or more are ordered at one time for Wood-Crate packing of Glass.

CONVENIENT CLEANING AND RELAMPING

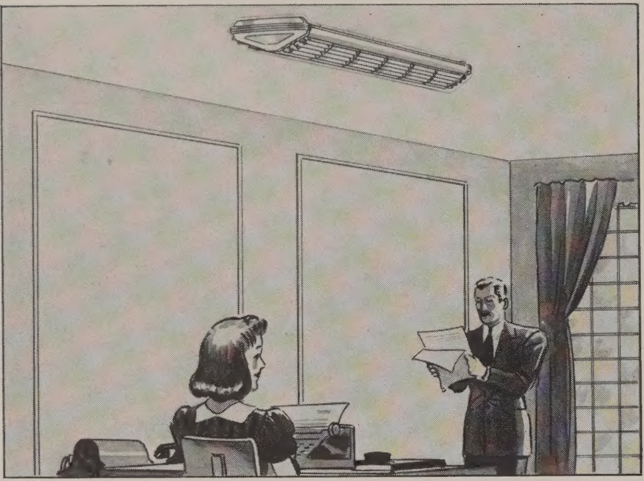
EXCELUX is easily serviced. To right is illustrated retaining end-hinged cover being lowered for cleaning and relamping. Glass Shields are completely encased within a rigid frame which can be disengaged — no tools — from the fixture body when desired. Inner reflector is removable for servicing.



GUTHLITE FLUORESCENT . . . *Super Downlight Rendere*

TRADE MARK REGISTERED—PATENTS PENDING

Shielded-Direct Illumination . . . For Stores, Offices and Schools



HIGH INTENSITY—GOOD MAINTENANCE

GUTHLITE delivers to the work-plane high intensity light-punch through strategically designed louvres which are set at downward and outward angles to provide best distribution of the light. Louvres permit good maintenance as bugs, dust and dirt drop right-on-through. Louvres are easily removed (without use of tools, screws, etc.), for easy relamping (see below to right).

LAYOUT SUGGESTIONS

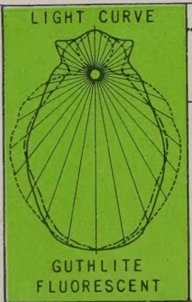
Shielded-Direct illumination is provided by GUTHLITE (see Light-Curve below). Upward light renders cheerful ceiling illumination. Side-Light through Plastic Sides is soft and pleasing. Most light, however, is delivered downward through engineered "Distributive" type Louvres. Uniform illumination is maintained yet wider spacing is possible than when conventional straight-up-and-down louvres are used. For best results, GUTHLITE should be installed so that the fixture spacing is not more than ¾ the distance from floor to bottom of the fixture.

ESTIMATED ILLUMINATION DATA

The following table may be of assistance for quick estimates of foot-candles from GUTHLITE. It should be remembered that this type fixture is more concentrating than EXCELUX and therefore spacing should be more seriously considered to effect uniform results. Figures below are for 10′ to 11′6″ mounting height.

		Foot-Candles With White Lamps		
Area	Size	2 Watts Sq. Ft.	3 Watts Sq. Ft.	4 Watts Sq. Ft.
Small	10′ x 15′	10-15	15-20	25-30
Average	20′ x 40′	17-22	30-35	40-45
Large	60′ x 150′	25-30	40-45	55-60

COEFFICIENTS OF UTILIZATION



Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.22	.18	.15	.20	.17	.14
I	.27	.23	.20	.25	.21	.19
H	.30	.26	.24	.28	.25	.22
G	.33	.30	.27	.30	.27	.25
F	.36	.32	.29	.32	.29	.27
E	.40	.36	.33	.36	.33	.30
D	.43	.39	.36	.38	.36	.33
C	.45	.41	.38	.40	.37	.35
B	.48	.45	.42	.43	.40	.38
A	.50	.46	.44	.45	.42	.40

NOTES—For 6-Lite GUTHLITE, multiply foot-candle intensity by 1.40.

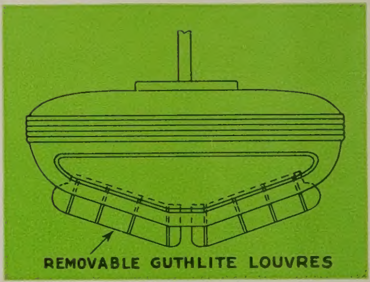
DESCRIPTION—GUTHLITE consists of an accessory channel, an efficient reflector, Plastic Sides, Luminous Plastic End-Plates and Guth "Distributive" Louvres.

Channels are of heavy-gauge steel. Accessories are attached to channel, and include Tulamp 95%-100% High-Power-Factor Ballasts with built-in Compensators, Starters, White 90° Rotating-Lock Lampholders. Fixtures are wired complete for 110-125 Volt, 60 cycle, A. C. operation. Top of channel has mounting holes and knockouts for suspension or ceiling mounting. Hangers, when furnished, are Single-Point suspension type and are Double-Stem for 10″ mounting holes in channel.

Reflector is finished "300° WHITE" and is removable for easy access to the innards. GUTHLITE body is formed by three lengthwise supporting rods which fasten into the two luminous Plastic Ends. Diffusing side panels are of Guth "Diamond Pattern" Plastic bound in 4-sided metal frames. Bottom louvres are made in two sections of heavy-gauge steel, spot welded at each cross-joint for rigidity, and are finished "300° WHITE." These "Distributive" type louvres allow wider spread of downward light due to their angle-settings, yet protect the eyes at normal angles of vision from direct-light. Step-Locks in ends of Louvres hold tightly in the Plastic Ends, yet are easily removed for relamping. Complete fixture basin can be lowered from one end or lifted-off, and down entirely.

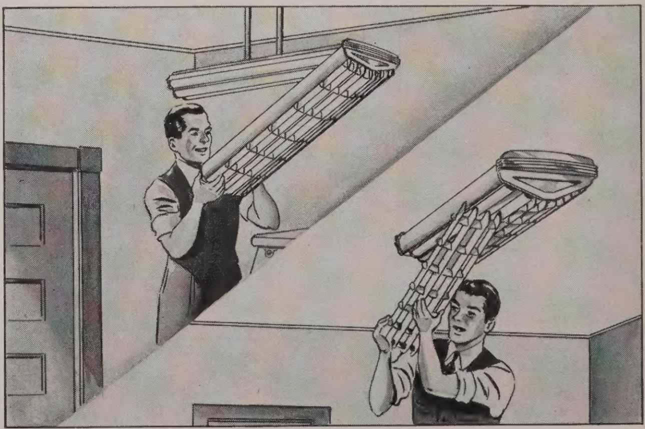
DISTRIBUTIVE LOUVRES

Cross-section, at right, illustrates strategically-set angle of each fin. Maximum punch from Fluorescent lamp is afforded with wider spread of light, permitting wider spacings. Direct light is shielded for normal angles of vision.

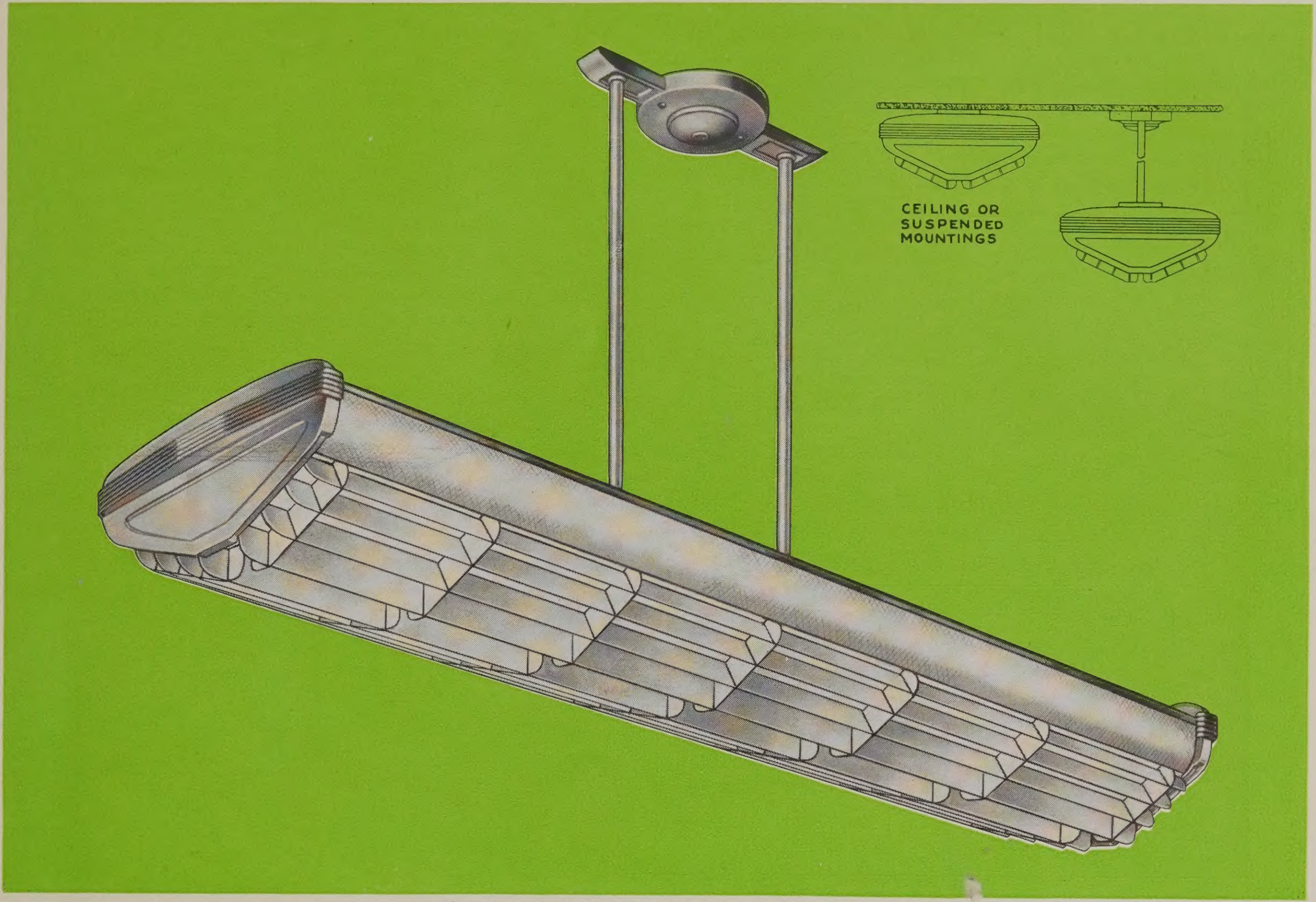


CONVENIENT CLEANING AND RELAMPING

Shown below are two sketches illustrating method for relamping and servicing. For relamping, only one section of louvre need be removed. End of louvre is tilted upward, while other end slips past the "Step-Lock" in Plastic End. For servicing, entire basin is lowered in one-end retaining hinge, reflector removed, and innards are in the open.



Through Engineered Wide Spread Eggcrate Louvres



LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE GUTHLITE

TRADE MARK REGISTERED—PATENTS PENDING

SUSPENDED TYPES—With Hangers

Cat. No.	Wired For	Drop*	Shg. Wt.	List	Code
M2290	4-40W	32″	75#	**$66.50**	PADER
M2292	6-40W	32″	83#	**89.50**	PADOT

*Body size is 50½″ by 15″. For longer length than 30 inches overall, add **80c** list per foot or fraction thereof. Canopy pull switches list at **$1.50** each.

CLOSE CEILING TYPES—Less Hangers

M2291	4-40W	7″	71#	**$62.00**	PADIS
M2293	6-40W	7″	79#	**85.00**	PADUV

EYE-TO-THE-FUTURE LIGHTING

Characteristics of the Fluorescent Lamp prohibits use of larger lamps than designated for a particular luminaire. GUTHLITE, however, can be obtained to anticipate increased illumination which may be desired at later dates. GUTHLITES listed below are initially wired for four forty-watt lamps, however are so constructed that by adding accessories in the fixture, two more lamps or a total of 6 40-watt lamps can be operated.

EYE-TO-THE-FUTURE GUTHLITES

Cat. No.	Wired For	Drop*	Shg. Wt.	List	Code
M2294*	4-40W	32″	75#	**$76.50**	PAGET
M2295*	4-40W	7″	71#	**72.00**	PAGIV

*M2294 is complete with hanger for 32-inch overall drop from ceiling. For longer lengths, add **80c** list per foot or fraction. Canopy pull switches list at **$1.50** each.

M2295 is Close Ceiling type for mounting direct to ceiling. Both the above luminaires are constructed so that 6 40-watt lamps can be operated in them by adding accessories.

GUTHLITE Fluorescent, companion design to Guth EXCELUX (the Diffusing-Direct Luminaire), renders quality illumination of Shielded-Direct nature. Strong Down-Lighting through engineered louvres is balanced with diffused Side-Lighting and General Ceiling illumination. For Close Ceiling or Suspended mounting, GUTHLITE is smartly styled for effective use in Stores, Offices and Schools.

GUTHLITE Louvres insure good maintenance and provide maximum lighting-punch from Fluorescent lamps. GUTHLITE Louvres are strategically set at outward angles to minimize light concentration and provide better light distribution to the working plane. Lamp shielding is afforded for normal comfort.

Sides of exclusive Guth "Diamond Pattern Plastic," luminous Plastic End-Plates, and "300° WHITE" reflectors are other GUTHLITE features. Louvres are removable from below (no screws or tools), and entire basin can be lowered by unhinging from one end.

TRUCOLITE CONSTRUCTION

TRUCOLITES listed on the following pages (Pages 15, 16 and 17) have the same base construction. End-plates for Open-Type Units are same as for Glass-Diffusing and Eggcrate-Shielding Types. Open-Types can be shielded at later dates if desired, by adding standard Glass Bottom or Eggcrates.

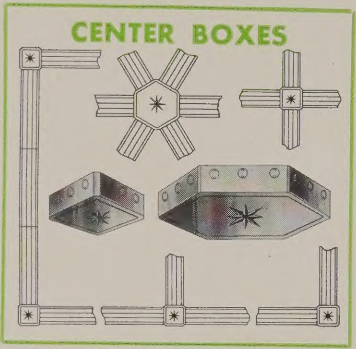
TRUCOLITES are constructed with efficient engineered-design reflectors, made of steel and finished "300° WHITE." Outer two reflectors allow upward light for ceiling illumination. Ends are of ornamental design. Accessories are housed in steel channel finished "300° WHITE," and include High-Power-Factor (95%-100%) Ballasts with Built-in Compensators, Starters, and 90° Rotating-Lock White Lampholders. Hangers when furnished are finished to match fixture.

TRUCOLITES are wired complete for 110-125 volt, 60 cycle, A. C., and are listed by Underwriters' Laboratories, Inc.

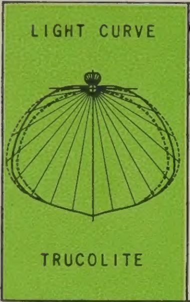
CONTINUOUS RUNS — Ends of fixtures are constructed so that TRUCOLITES can be conveniently installed end-to-end in Continuous-Runs. The Polished Ornamental Fluting on the standard TRUCOLITE end is removed on the job; this uncovers a ⅞″ knockout to allow for continuous-wiring. When the Flutes are removed, TRUCOLITES butt flush, one-as-against another. Each Flute removed, saves ⅛″ space in the run.

CENTER BOXES — Two styles available for use with TRUCOLITES when bunching on ceiling or turning corners. Sketches to left illustrate types and their use.

M2220—Square Box—List $7.50, and M2221—Hexagonal Box—List $16.00 may be used with Four-Light TRUCOLITE sizes. Boxes are made of heavy gauge steel, finished "300° WHITE," with Polished Ornament on bottom. Knockouts in sides make wiring connections easy.



COEFFICIENTS OF UTILIZATION



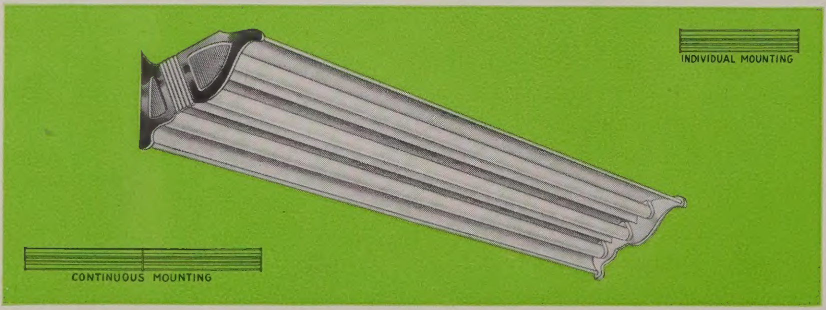
Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.36	.30	.25	.35	.30	.25
I	.44	.40	.36	.43	.38	.34
H	.48	.45	.41	.46	.43	.40
G	.53	.49	.45	.51	.47	.44
F	.56	.53	.48	.54	.51	.47
E	.61	.58	.54	.59	.56	.53
D	.65	.62	.59	.63	.60	.58
C	.68	.64	.61	.66	.62	.60
B	.71	.69	.66	.69	.67	.64
A	.73	.71	.69	.70	.69	.67

LAYOUT DATA

TRUCOLITES deliver wide light distribution and may be installed so that their spacing (distance between units) is from 1 to 1¼ times their mounting height (distance from floor to bottom of fixture). Upward light produces highly desirable soft ceiling illumination. This ceiling illumination is desirable whether units are suspended on hangers or mounted direct to the ceiling.

● **TRUCOLITES FOR OFFICES AND STORES** — Photo above shows TRUCOLITES mounted directly to 11′ ceiling in Offices of the Federal Savings Bank, Tulsa, Okla., on 10′ x 10′ centers to deliver 45 foot-candles.

Photo to left shows TRUCOLITES installed in Head's Shoe Store, Wichita, Kansas, on 11′6″ x 13′ spacings and 11′ mounting height to deliver 30 foot-candles. Note pleasing ceiling light.



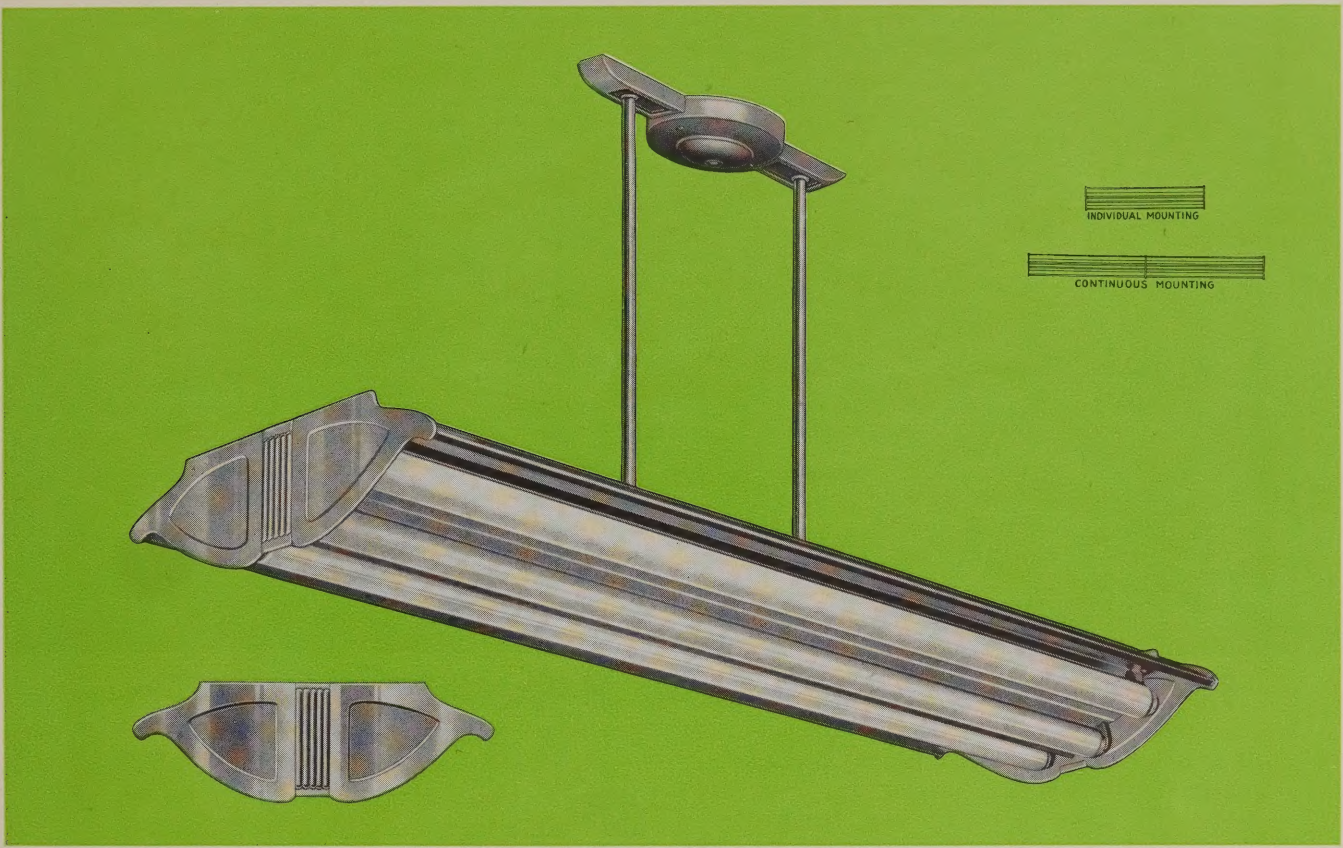
Cat No.	For Lamp	Fixture Size	Ship. Wt.	List Price	Code
M2150W	2-48″	48⅛ x 7 x 7½″	24	**$47.75**	OYLOF
M2154W	3-48″	48⅛ x 9 x 9½″	29	**59.00**	OYMAC

TRUCOLITES Brackets are made on-order; are not carried in stock.

TRUCOLITE WALL BRACKETS

TRUCOLITES companion designed and constructed Wall-Brackets provide general illumination plus soft wall lighting. There are numerous applications and very interesting effects possible with the TRUCOLITE Bracket. It is a flexible unit, for either 2 or 3 40-watt lamps, and can be mounted individually or in continuous runs. The TRUCOLITE Wall Bracket has satin ends with polished highlights. When mounted continuously, units are butted one against the other. Each lamp has efficient "300° WHITE" Removable Reflector.

Luminaire with Efficient 300° White Reflectors

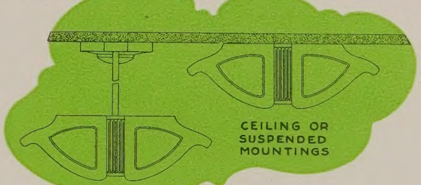


LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE TRUCOLITE

TRADE MARK REGISTERED—U. S. PATENT No. 122586—OTHERS PENDING

TRUCOLITE—styled by Guth—represents the ultimate in design, efficiency and lighting effectiveness. Recommended for Stores, Offices, Office Buildings, Hotels, Theatres, Restaurants and other commercial establishments, TRUCOLITES' trimness and compactness, in true modern design, and its neutral finish blend with all architectural interiors. The engineered reflectors are finished "300° WHITE" to insure maximum efficiency. A small portion of light is allowed upward to wash-out ceiling shadows and afford soft ceiling-illumination. Units can be mounted individually or butted end-to-end continuously and can be suspended from or attached direct to the ceiling.



ESTIMATED ILLUMINATION DATA	Foot-Candles With White Lamps		
Room Size	1-Watt/ Sq. Ft.	2-Watts/ Sq. Ft.	3-Watts/ Sq. Ft.
10′ x 15′	8-12	19-23	32-37
20′ x 40′	14-18	32-36	45-50
60′ x 150′	20-23	40-45	64-69

Figures based on .75 maintenance factor.

EYE-TO-THE-FUTURE TRUCOLITES — TRUCOLITES listed on the page are of the open-lamp type. On the two following pages are listed TRUCOLITES with Glass Diffusing Bottom, and also with Eggcrate-Shielding Bottom. With an "Eye-to-the-Future," all Four-Light TRUCOLITE ends are similarly constructed so Eggcrates or Glass Bottoms can be added to open-types later, if desired.

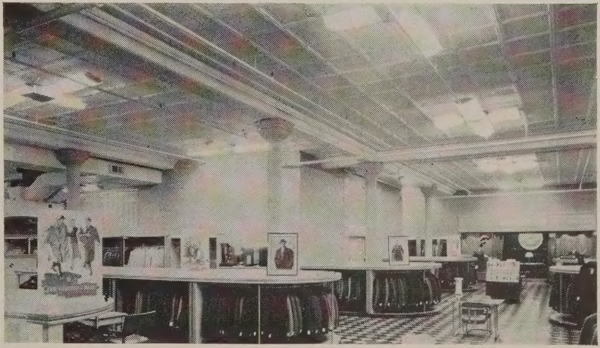
SUSPENSION TYPES—With Hangers

Cat. No.	For Lamps	Fixture Body Size	Std. Lgth.	Shp. Wt.	List Price	Code
M2450	4-40W	48⅜″ x 16″ x 5¼″	30″	35#	**$44.00**	PEHOJ
M2451	4-20W	24⅜″ x 16″ x 5¼″	30″	21#	**36.50**	PEHUK

CLOSE CEILING TYPES—Less Hangers

Cat. No.	For Lamps	Fixture Body Size	Std. Lgth.	Shp. Wt.	List Price	Code
M2455	4-40W	48⅜″ x 16″ x 5¼″	5¼″	31#	**$39.50**	PEIHM
M2456	4-20W	24⅜″ x 16″ x 5¼″	5¼″	18#	**33.00**	PEIMS

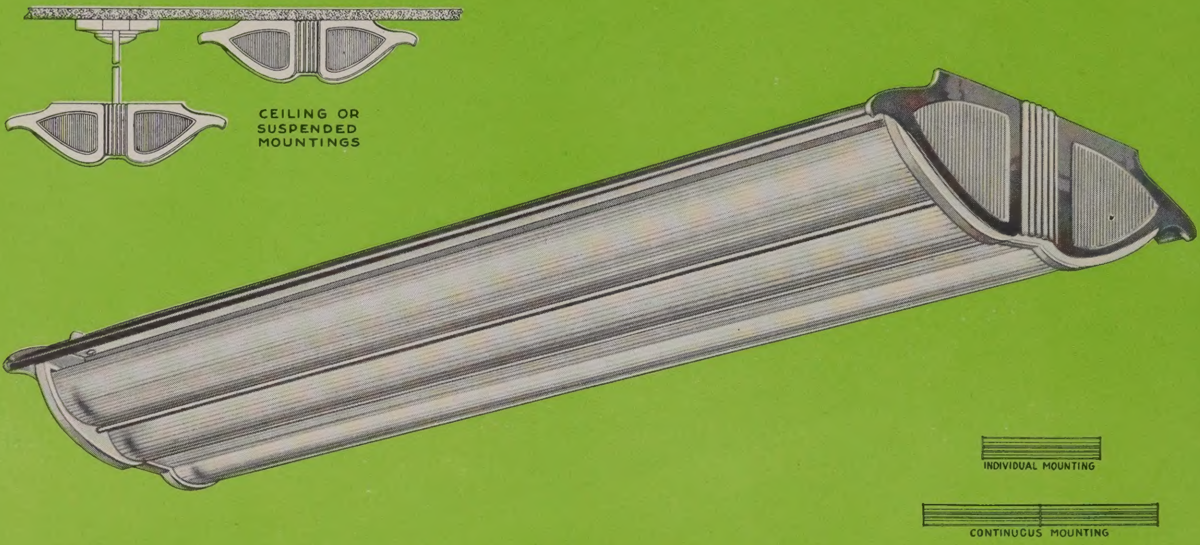
NOTES: For longer lengths on Suspended Type TRUCOLITES, add 80c list per foot or fraction thereof. Canopy pull switches list at $1.50 each.



TRUCOLITES installed in Men's Clothing Section of a large Louisville, Kentucky Department Store. Two 4-Foot and two 2-Foot TRUCOLITES are used with Center Box M2220 (see Page 14) on 20′ x 22′ spacings and 15′ ceiling to deliver 40 foot-candles of uniform illumination.

Guth TRUCOLITE . . . *With Glass Bottom, Diffused Quality Illumination*

TRADE MARK REGISTERED AND PATENTS PENDING



LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE TRUCOLITE *With Diffusing Glass Bottom*

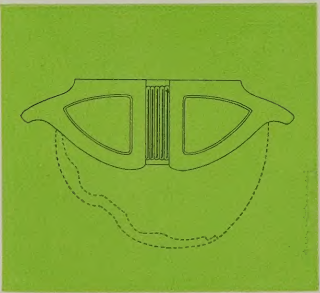
TRADE MARK REGISTERED—U. S. PATENT No. 122586—OTHERS PENDING

TRUCOLITE — The efficient luminaire with "300° WHITE" reflectors is listed herewith with prismed, low brightness glass, which diffuses the Fluorescent lamps to render quality illumination. The efficient glass is formed to contour of the trim compact TRUCOLITE end design, and is rigidly held between two end-holders and two elongated bottom rods. TRUCOLITE reflectors assure lower surface-brightness. The Glass in its rigid basket hinges down for easy relamping.

TRUCOLITES with Diffusing Glass Shield are appropriate for Offices, Stores and many other Commercial applications where trim appearance and performance are requisites.

ESTIMATED ILLUMINATION DATA		Foot-Candles With White Lamps		
	Room Size	1-Watt/ Sq. Ft.	2-Watts/ Sq. Ft.	3-Watts/ Sq. Ft.
	10′ x 15′	7-10	15-20	25-30
	20′ x 40′	11-14	22-27	35-40
	60′ x 150′	15-17	30-35	45-50

Figures based on .70 maintenance factor.



EASY RELAMPING

Sketch to left illustrates easy hinging glass diffuser as it lowers from one side. By a slight "lift," the entire glass diffuser with frame, can be taken down. Practically made, for practical relamping and cleaning.

SUSPENDED TYPES—With Hangers

Cat. No.	Lamp Wattage	O. A. Drop*	Shp. Wt.	List	Code
M2460	4-40W	30″	70#	**$59.50**	PAVOK
M2461	4-20W	30″	35#	**49.50**	PAVUL

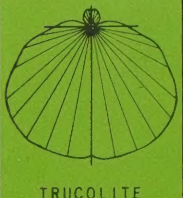
*For longer length, add 80c list per foot or fraction thereof. Canopy pull switches list at $1.50 each.

CLOSE CEILING TYPES—Less Hangers

Cat. No.	Lamp Wattage	O. A. Drop*	Shp. Wt.	List	Code
M2465	4-40W	5″	66#	**$55.00**	PAWAH
M2466	4-20W	5″	31#	**46.00**	PAWIK

COEFFICIENTS OF UTILIZATION

LIGHT CURVE



TRUCOLITE GLASS BOTTOM

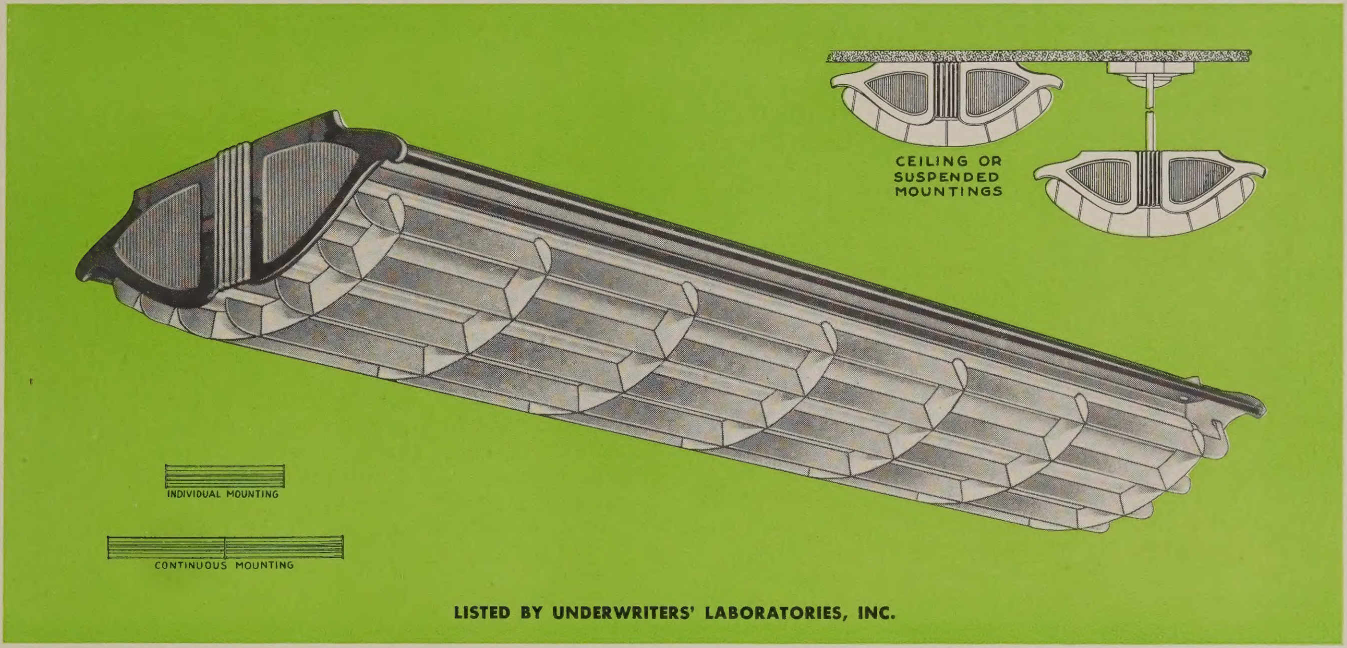
Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.31	.27	.25	.30	.26	.24
I	.38	.35	.32	.35	.33	.31
H	.41	.36	.36	.39	.36	.35
G	.45	.40	.38	.43	.42	.38
F	.47	.45	.42	.44	.41	.39
E	.50	.48	.46	.48	.46	.45
D	.53	.52	.50	.52	.50	.48
C	.56	.53	.51	.54	.51	.50
B	.58	.56	.53	.56	.55	.51
A	.60	.58	.56	.58	.55	.53

DESCRIPTION

TRUCOLITES with Diffusing Glass Bottom, are constructed similarly to Open-Type TRUCOLITES as described on Page 15. Fixture Body Size is 48½″ x 16″ x 5″. Individual "300° WHITE" reflectors are engineered for high-efficiency. Outer two reflectors are designed to permit upward illumination for soft ceiling lighting. Ornamental ends of exquisite design have integral lugs to which is held the glass diffuser in cast end-holders with long satin rods. TRUCOLITES are wired complete for 110-125 volt, 60 cycle, A. C. operation. Listed by Underwriters' Laboratories, Inc.

Guth TRUCOLITE . . . *With Louvres for Strong Downlight Fully Shielded*

TRADE MARK REGISTERED AND PATENTS PENDING



LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE TRUCOLITE *With Shielding Louvres*

TRADE MARK REGISTERED—U. S. PATENT No. 122586—OTHERS PENDING

The efficiently constructed TRUCOLITE with "one-piece" Eggcrate Louvres shields lamps at normal angles of vision to produce comfortable illumination for Stores, Offices and other applications where strong shielded downlight is desired. The trim compact design offers clean architectural treatment and enhances interiors of *modern design.*

TRUCOLITE'S Eggcrate is hinged from one side and can also be completely taken off the luminaire. Eggcrate is constructed rigidly with Guth's "Super-Spot-Welding" application to provide "bridge-type" construction and lasting use.

ESTIMATED ILLUMINATION DATA	Room Size	Foot-Candles With White Lamps 1-Watt/ Sq. Ft.	2-Watts/ Sq. Ft.	3-Watts/ Sq. Ft.
	10′ x 15′	7-11	16-22	27-33
	20′ x 40′	12-15	25-30	55-60
	60′ x 150′	16-18	35-40	70-75

Figures based on .75 maintenance factor.

SUSPENDED TYPES—With Hanger

Cat. No.	Lamp Wattage	O. A. Drop*	Shp. Wt.	List	Code
M2470	4-40W	32″	60#	**$56.00**	PAWUM
M2471	4-20W	32″	30#	**46.50**	PAXAJ

*For longer length, add 80c list per foot or fraction thereof. Canopy pull switches list at $1.50 each.

CLOSE CEILING TYPES—Less Hangers

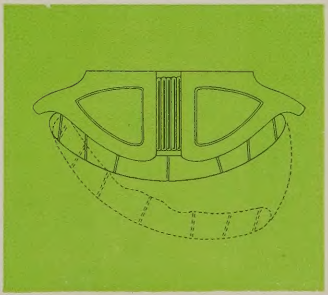
Cat. No.	Lamp Wattage	O. A. Drop*	Shp. Wt.	List	Code
M2475	4-40W	7″	56#	**$51.50**	PAXIL
M2476	4-20W	7″	27#	**43.00**	PAXOM

DESCRIPTION

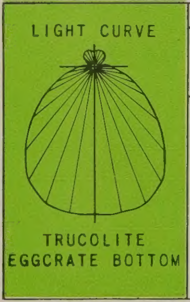
TRUCOLITE fixture body size is 48½″ x 16″ x 7″. Reflectors are finished "300° WHITE" to deliver maximum light output. Upward light produces soft ceiling illumination. Ornamental end-plates of trim compactness have integral lugs to which are held the Louvred Eggcrate. Eggcrate is of heavy-gauge steel, "Super-Spot-Welded," in bridge type construction, and finished "300° WHITE." TRUCOLITES are wired complete for 110-125 volt, 60 cycle, A. C. operation and are listed by Underwriters' Laboratories, Inc.

EASY SERVICING

Sketch to right illustrates easy hinge-drop of TRUCOLITE'S Eggcrate. A slight upward "lift" from this hinged position, and off comes the Eggcrate entirely. Made practical, for easy relamping, cleaning and servicing.



COEFFICIENTS OF UTILIZATION



Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.30	.25	.22	.29	.25	.22
I	.37	.33	.30	.33	.30	.29
H	.40	.37	.34	.38	.35	.33
G	.44	.42	.39	.43	.41	.37
F	.46	.43	.40	.42	.39	.38
E	.49	.47	.45	.47	.45	.44
D	.54	.51	.49	.51	.49	.47
C	.55	.52	.50	.53	.50	.49
B	.57	.55	.52	.55	.54	.52
A	.59	.57	.55	.57	.54	.53

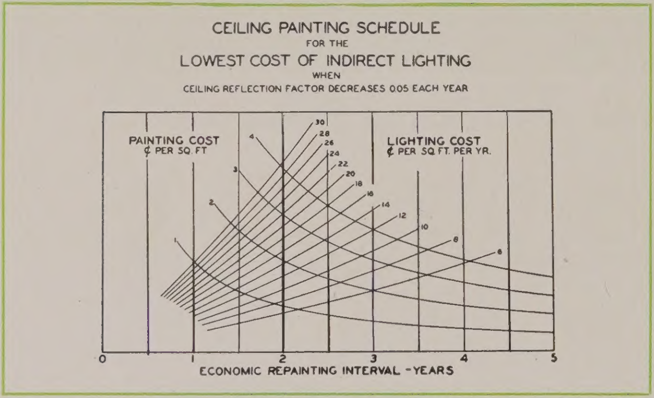
Guth FLU-O-INDIRECT . . Renders Highest Quality Illuminatio

TRADE MARK AND PATENTS PENDING

Totally Indirect Light . . . No Shadows . . . Exhilarating Light

CONCEALED LIGHT SOURCE

FLU-O-INDIRECT delivers all the light upward where it is redirected from the ceiling to the working area. This type lighting is ideal for offices, schools and in some stores. Illumination on the work-plane is uniform, shadowless and glareless. The complete concealment of the lamps does away with all direct and reflected glare. Light to the work-plane comes from many angles at the ceiling, thereby eliminating shadows on the desk. The ceiling acts like a vast sky, no bright spots, delivering this good quality of exhilarating, more natural illumination. Like reading a book under a shade-tree outdoors—real natural light.



CEILING CONDITIONS

Indirect lighting requires light ceilings for most efficient operation. The ceiling is actually a part of the lighting system, and should be repainted at intervals which will depend upon the economical balance between *cost of light* absorbed by dirty and darkened ceilings, and the *cost of maintenance*. The chart above was developed by the General Electric Co.—here is how it applies. Knowing the cost of repainting per square-foot and the yearly cost of light per square foot, the intersection of the lines representing these values should be protracted into the time scale at the left side to get the economical repainting period. For instance, the chart shows that a ceiling should be repainted in about 2¼ years if the lighting cost is 12c per square foot per year and the painting cost is 2c per square foot.

It must be noted that the chart is based on an average accumulation of dirt and darkening from age, with a ceiling of usual materials.

If the dirt accumulation is lessened by means of air conditioning or if the darkening is retarded by the employment of more permanent surfaces, the chart will not apply. It is reproduced here as an illustration of the principle involved rather than as a quantitative basis for design calculations.

ESTIMATED ILLUMINATION DATA

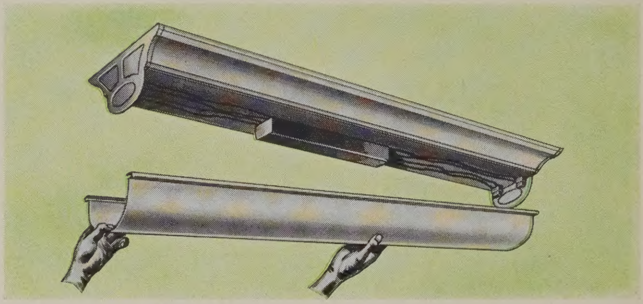
Following table will assist in determining approximate foot-candles on 10′ to 11′6″ ceilings which have a 75% reflection factor and good side walls. Data is for White lamps and normal depreciation.

		Average Foot-Candles		
Area	Size	2 Watts/ Sq. Ft.	3 Watts/ Sq. Ft.	4 Watts/ Sq. Ft.
Small	10′ x 15′	6-12	10-18	15-24
Average	20′ x 40′	9-18	19-27	27-35
Large	60′ x 150′	14-26	25-38	35-50

DESCRIPTION

FLU-O-INDIRECT is of heavy gauge steel with body of two sections. Bottom half is removable for access to accessories and convenient wiring in Continuous arrangements. Ends are ornamented, and formed of steel. In continuous installations, fixtures may be easily joined together as ends have two 3/16″ knockouts in their top for fastening with Stove-Bolts, and one 7/8″ knockout in bottom center for use with nipple for continuous wiring. Assortment of knockouts in top of reflector materially helps in lining up hangers with ceiling outlets in Continuous-Runs.

Entire exterior of FLU-O-INDIRECT body is finished "300° PALE IVORY" so that fixture "blends-in" with the ceiling illumination. Inner reflecting surface is designed for 80% efficiency and finished "300° WHITE." Hangers are finished aluminum and light gray. FLU-O-INDIRECT is wired complete for operation on 110-125 Volt, 60 Cycle, A. C., and is listed by Underwriters' Laboratories, Inc.



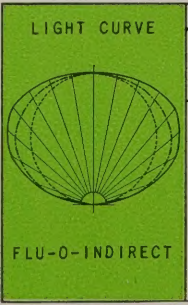
EASY INSTALLATION AND SERVICING

Sketch above illustrates how bottom portion of FLU-O-INDIRECT is removed. When installing fixtures in Continuous-Runs, this accessory cover is left off. Ends of units, butted one against the other, are "tied" together with Stove-Bolts in the 2 top 3/16″ K. O.'s, then nipple is used to lock bottom parts together. Continuous wiring channel is then effected through the nipple—and only one outlet is needed per unit or entire run. Accessory housings are then put back on after all wiring and connections are made.

LIGHTING INTENSITIES

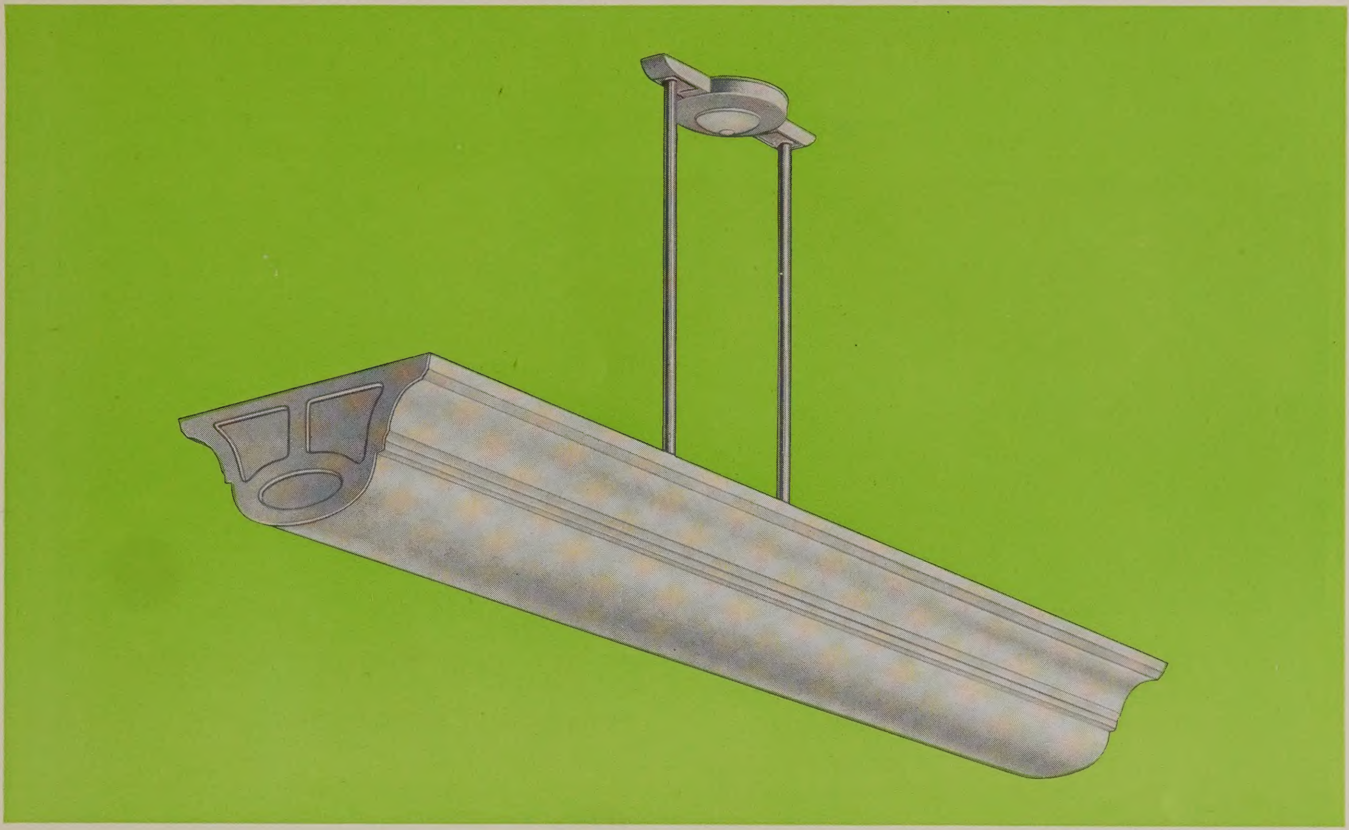
FLU-O-INDIRECT lighting for general office work should be from 25 to 30 foot-candles. This fact is based on the paper presented before the Illuminating Engineering Society, September, 1941, by Ward Harrison, General Electric Co., Nela Park, Cleveland, Ohio. Nela Park has conducted comfort or ease of reading tests whereby "blinks-of-the-eyes" of readers are tabulated. Eye-blinks are a criterion of eye-comfort and eye-strain. Under these tests, it was shown that 25 to 30 foot-candles of Indirect Lighting is preferred to other levels of illumination with this type of lighting.

COEFFICIENTS OF UTILIZATION



Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.16	.13	.11	.11	.08	.07
I	.20	.16	.15	.14	.11	.10
H	.23	.19	.17	.15	.13	.11
G	.26	.22	.19	.18	.15	.13
F	.28	.25	.22	.20	.17	.15
E	.32	.28	.26	.22	.19	.17
D	.35	.31	.29	.23	.21	.20
C	.37	.34	.31	.25	.23	.21
B	.42	.38	.35	.27	.26	.24
A	.44	.41	.38	.29	.27	.26

t Lower Wattages and with Less Heat



LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE FLU-O-INDIRECT

TRADE MARK AND PATENTS PENDING

Indirect lighting—exhilarating, shadowless, high-quality illumination is the kind of light produced by FLU-O-INDIRECT, the totally indirect luminaire. Recommended for Offices, Drafting Rooms and certain Store Areas, FLU-O-INDIRECT is suspended from the ceiling in Individual or Continuous arrangements.

FLU-O-INDIRECT is of rectangular design and "fits" nicely into the plan of rectangular and square areas. Proper lighting intensities for best seeing results can be produced at lower wattages and with less radiant heat so that operation of FLU-O-INDIRECT is very practical for Air-Conditioned Offices and Stores.

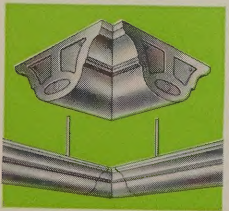
FLU-O-INDIRECT is of efficient functional design; its exterior is finished Pale Ivory to "blend-in" with the ceiling illumination. For better seeing-conditions in Offices and for refined atmospheres in Stores, install FLU-O-INDIRECT.

Cat. No.	Wired For	Fixture Length	O. A. Drop	Shp. Wt.	List	Code
M2320	2-100W	60⅛″	30″	55#	**$54.00**	PAGOW
M2321*	2-40W	48⅛″	30″	38#	**34.50**	PAGUX
M2322	2-65W	36⅛″	30″	35#	**39.00**	PAHAT
M2325	4-40W	48⅛″	30″	45#	**48.00**	PAXUN

*M2321 and 2325 are of identical construction; only difference is that M2325 is wired for initial operation of 4 40-watt lamps. The M2321 is constructed with an "Eye-to-the-Future" so that by merely adding accessories, one or two more 40-watt lamps can be operated for increased illumination if desired.

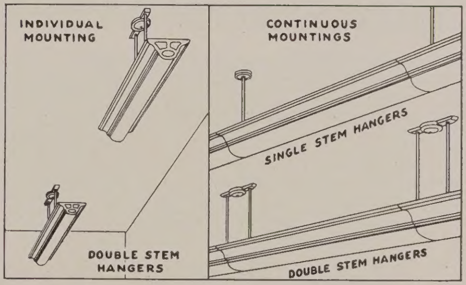
Hangers—All types listed above are furnished with M1861 Double-Stem, Single-Point Suspension hanger. Units can be obtained with M350 Single-Stem hanger for use in continuous-runs if desired—deduct $2.00 from above list prices for M350 instead of M1861. Canopy pull-switches list at $1.50 each.

MITRED-CORNERS



Flu-O-Indirects are very effective in Continuous-Runs. To carry-out Rectangular and Square layout arrangements, the M2329 Mitred-Corner shown to left, is used in the corners of runs. M2329 has same exterior finish as standard Flu-O-Indirects. Is complete with two standard ends for bolting to ends of Flu-O-Indirect. Hangers not furnished with M2329 which are intended to "ride-on" the suspended Flu-O-Indirect lighting system. There are no inner reflectors in M2329 so wires can be "fished-through" for Continuous-Wireway.

Cat. No. **M2329**—Code PAYAK—List Each............**$7.50**



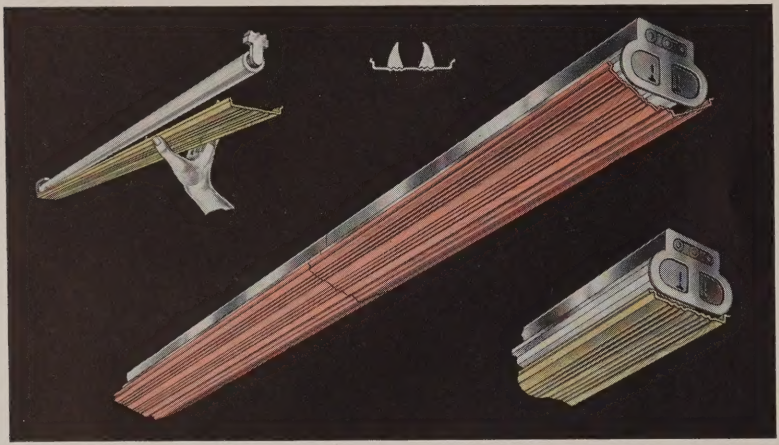
INDIVIDUAL **CONTINUOUS**

Illustrations above show FLU-O-INDIRECTS using the two type hangers described at left. For Individual mounting, the M1861 Double-Stem hanger is used. This hanger is suspended from a single-point in the ceiling. When FLU-O-INDIRECTS are run continuously, with units "tied-together" with stove-bolts either the M1861 Double-Stem hanger can be used, or the M350 Single-Stem hanger can be used. FLU-O-INDIRECTS have swedged-in nipples on 10″ centers; also have knockouts on 25″ centers and K. O.'s 5″ from each end.

"PFC's" . . . Channels and Strips . . . *Reduce Lamp Brig*

U. S. PATENTS, No. 127394 AND No. 126894—OTHERS PENDING

"PFC STRIPS" are all-plastic light-diffusers. Plastic Clips on the Strips are made to snap-on and snap-off Size T-12 Fluorescent lamps. "PFC" STRIPS can be used on any Guth open type one or two-light fixtures, like the GUTH M1640 shown below. Guth's new "PFC" Plastic Diffuser Strip is made in two lengths 11⅞" and 24", in three colors — WHITE, PINK AND YELLOW — for the T-12, 1½" Fluorescent lamp. The WHITE "PFC" is used for general diffused illumination; the YELLOW "PFC" on White lamps, and the PINK "PFC" on Daylight lamps materially improves color value of Fluorescent lamps.



Cat. No.	Plastic Color	O.A. Lgth.	List Prices Lots of 4	List Prices Lots of 100
PFC-110 **PFC-120** **PFC-130**	White Yellow Pink	11⅞"	**$1.25**	**$1.00**
PFC-111 **PFC-121** **PFC-131**	White Yellow Pink	24"	**2.50**	**2.00**

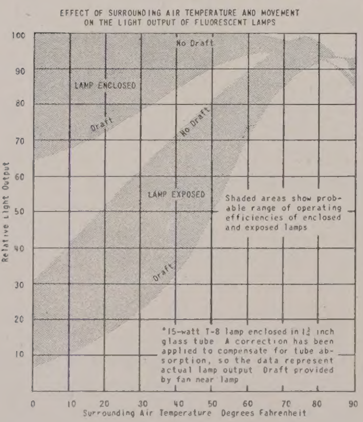
DESCRIPTION: Prices above are for "PFC" Plastics (only) and are to be added to fixture prices. "PFC's" can be used on one and two-light FLUOFLECTOR Strips, and for many other applications. Each "PFC" is 4" wide by ½" high (excluding integral clamps which snap-on the lamp). "PFC" Strips are not made for T-8, 1" lamps or for 18" lamps. If less than four assorted are ordered at one time, add 20% to prices above.

"PFC" DATA, TESTS & BRIGHTNESS

"PFC's" "Snap-On"—then "Snap-Off"

All-plastic, "PFC's" are simple yet extremely practical. "PFC's" cut down lamp brightness to avoid eyestrain, and minimize color-bleaching of articles displayed under Fluorescent lamps. "PFC's" cut-out reflected glare off typewriter-keys, and off employees' eye-glasses. The colored "PFC's" are effective for seasonal displays in stores. Finally, "PFC's" actually aid in color-correction. "PFC's" are shatterproof—no breakage—do not affect lamp life. If you have a bare Fluorescent lamp problem—TRY "PFC's." They "Snap-On" easily—"SNAP-UP" Fluorescent lamp performance.

"PFC's" Up Efficiency



With "PFC's" "snapped-on," greater overall efficiencies can be expected from Fluorescent lamps. In graph to left are efficiency figures of the Fluorescent lamp, both enclosed and exposed, when operated under various temperatures and subject to draft conditions.

"PFC's" tend to reduce draft effects about the lamp and further tend to confine heat generated by the lamps themselves to effect better operating efficiency. Lamps operate at highest efficiency at normal room temperatures of 70 to 80° F. per graph, and with a minimum of drafts.

BRIGHTNESS IN TRANSMISSION READINGS

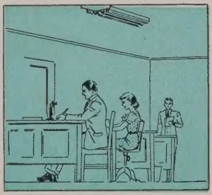
	Candle-Power Brightness	Transmission Factor
Bare 20-Watt White Lamp	3.6 C. P.	. . . .
Same lamp with White "PFC"	2.39 C. P.	82%
Same lamp with Yellow "PFC"	2.15 C. P.	75%
Same lamp with Pink "PFC"	1.93 C. P.	68%
Same lamp with Blue "PFC"	1.89 C. P.	66%
Same lamp with Green "PFC"	1.89 C. P.	66%
Same lamp with CRI Glass (for comparison)	2.4 C. P.	78%

NOTE: Above figures do not take into consideration useful reflected light out of top of channel and therefore are not efficiency readings. When used with Luminaires, the white "PFC" is 85% to 87% efficient.

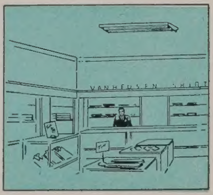
Lamp-Life Unaffected by "PFC's"

Metal objects against Fluorescent lamps cause condensation of the Mercury Vapor within the lamp which discolors the lamp. Also, operating temperatures within the lamp are changed by the metal object which affects the internal pressure of the Mercury Vapor which in turn affects lamp performance and life.

Knowledge of the above facts by Guth engineers, led to submittal of "PFC" plastics for tests by the laboratory of a large lamp manufacturer. In laboratory tests, "PFC's" on standard Fluorescent lamps were found to have no apparent effect on lamp life or lamp performance.



FOR OFFICES



FOR STORES

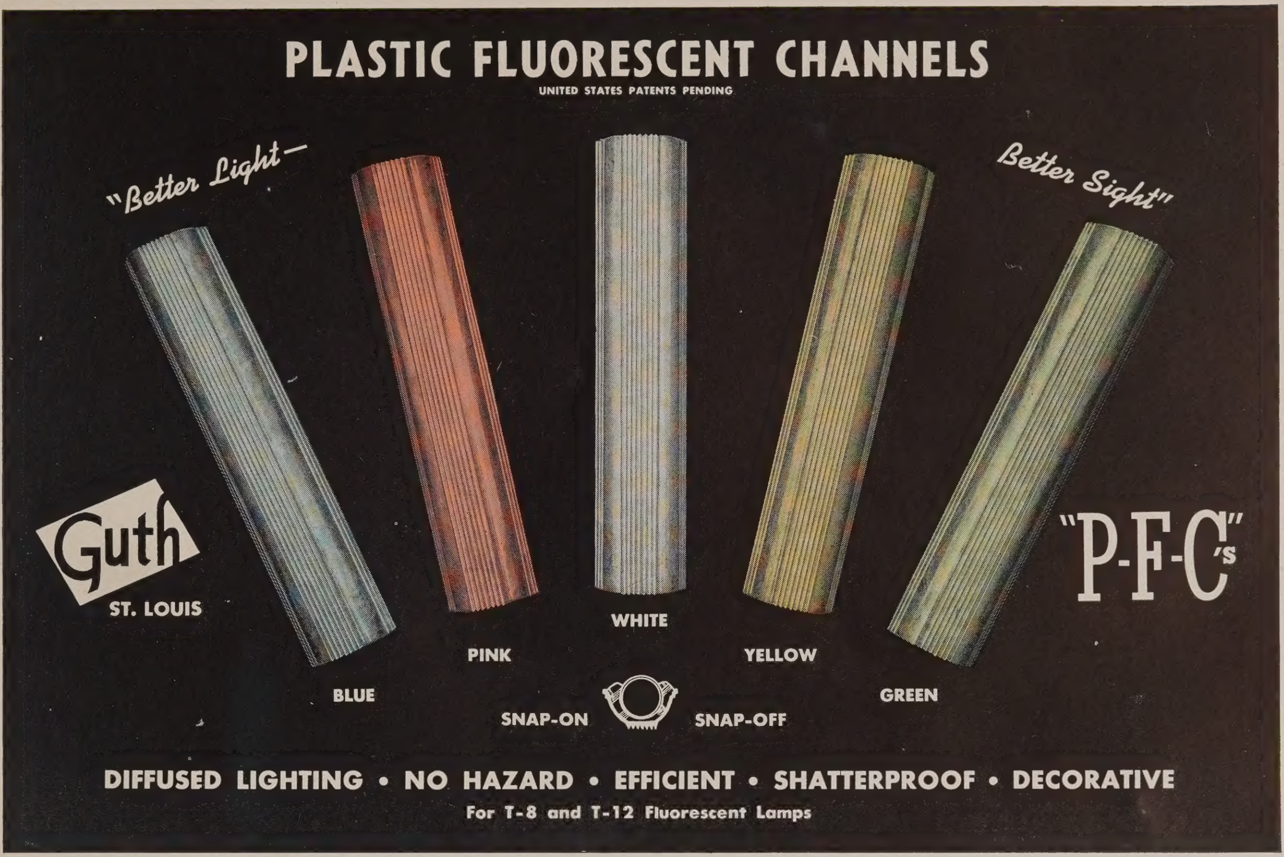
COLOR FADING

FOR OFFICES — "PFC's" provide lower brightnesses, and eliminate harsh glare (by "full-screening" of the lamp) from business machine keys, and from employees' eye-glasses. "PFC's" assist to provide more natural color values in offices.

FOR STORES — Pink "PFC's" on Daylight lamps, and Yellow "PFC's" on White lamps provide more natural color under which to exhibit shades of red and yellow. Colored "PFC's" are effective for decorative and seasonal displays. "Snap-on" easily — then are conveniently stored away if so desired.

COLOR FADING — EVAPORATION
Unnatural appearances and fading characteristics of meats and other articles under Fluorescent lamps, can be lessened or eliminated by use of Pink or Yellow "PFC's." Evaporation of expensive perfumes can be lessened by shielding Fluorescent lamps with efficient light-transmitting "PFC's."

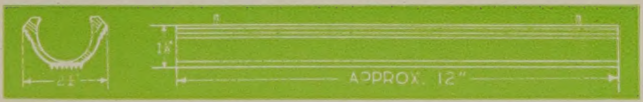
ess . . . Safe, Lightweight, Shatterproof and Decorative!


PLASTIC FLUORESCENT CHANNELS
UNITED STATES PATENTS PENDING
"Better Light—
Better Sight"
Guth
ST. LOUIS
"P-F-C's"
BLUE
PINK
WHITE
YELLOW
GREEN
SNAP-ON
SNAP-OFF
DIFFUSED LIGHTING • NO HAZARD • EFFICIENT • SHATTERPROOF • DECORATIVE
For T-8 and T-12 Fluorescent Lamps

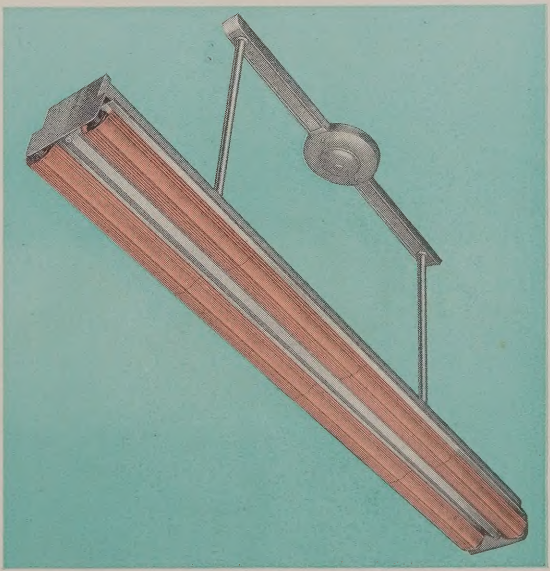
"PFC's" ARE LIGHTWEIGHT Plastic Shields which simply and conveniently "snap-on" and "snap-off" both T-8 and T-12 Fluorescent lamps to provide diffused lighting of accepted brightness standards for stores, offices and hundreds of other applications. Richly grained, they are available in five colors, white, yellow, pink, pale blue and light green, and are decorative as well as functional.

The white "PFC's," most commonly used for general lighting in offices and stores, reduce lamp brightness by over 30% yet are more efficient in light transmission than are diffusing glass panels. There is no hazard with "PFC's" as in the case of glass panels—no danger when replacing burned-out lamps. Maintenance cost of luminaires using "PFC's" are of a minimum. Simply "snap-off" the "PFC's" or still simpler, take down the lamp and "PFC's" together. Low in cost, "PFC's" are economical to install. They are shatterproof, thereby minimizing breakage cost. (See preceding page for tests and other information on "PFC's.")

Cat. No.	Plastic Color	For Lamp Size	O.A. Lgth.	List Price Lots of 4	List Price Lots of 100
PFC-10	White	T-12	11⅝"	$0.60	$0.50
PFC-11	White	T-8	11⅝"		
PFC-20	Yellow	T-12	11⅝"		
PFC-21	Yellow	T-8	11⅝"		
PFC-30	Pink	T-12	11⅝"		
PFC-31	Pink	T-8	11⅝"		
PFC-40	Green	T-12	11⅝"		
PFC-41	Green	T-8	11⅝"		
PFC-50	Blue	T-12	11⅝"		
PFC-51	Blue	T-8	11⅝"		

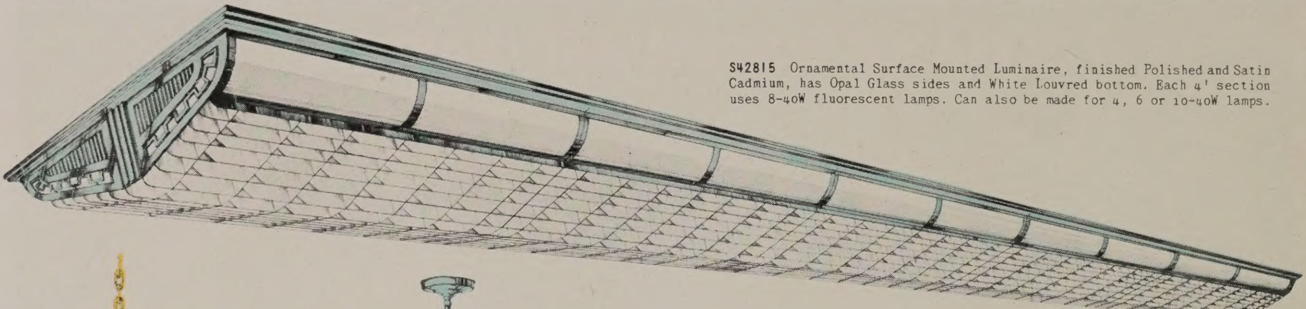

1⅛"
APPROX. 12"

DESCRIPTION: Each "PFC" is 11⅝" long, 2$\frac{5}{16}$" wide, and 1⅛" deep. Four "PFC's" are required for each 48" Fluorescent lamp, three for each 36" lamp, and two for each 24" lamp. "PFC's" are not made for 18" lamps. "PFC's" are available in two sizes, that is, one size for 1½" (T-12) Fluorescent lamp, and one size for 1" (T-8) Fluorescent lamp. Assorted colors may be ordered to make up quantities. If less than four "PFC's" are ordered at one time, the list price per unit is 85 cents. Standard shipping carton consists of four "PFC's."

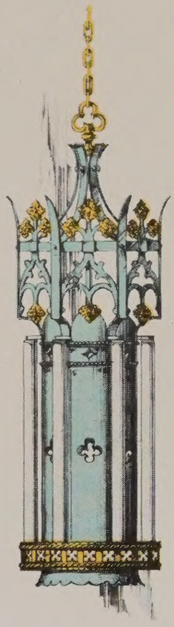


"PFC's" are decorative as well as functional. Photo above shows underneath view of FLU-O-FLECTOR with "PFC's" snapped-on. The plastics in all colors have a rich pearl graining that enhances appearance by covering streaky and powdery effects in the lamps. "PFC's" also will hide "lamp-end-blackening" which happens to lamps in some cases.

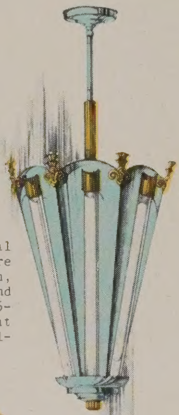
CUSTOM-BUILT FLUOFLECTORS



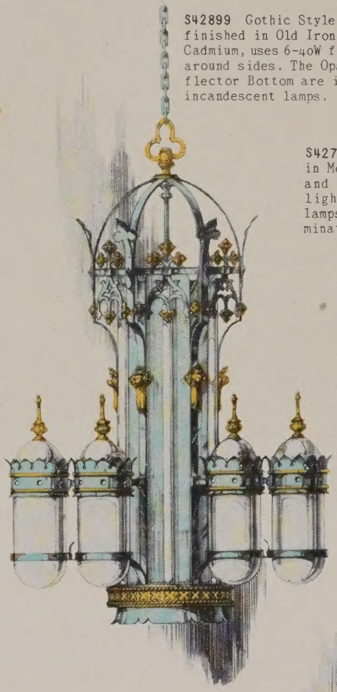
S42815 Ornamental Surface Mounted Luminaire, finished Polished and Satin Cadmium, has Opal Glass sides and White Louvred bottom. Each 4' section uses 8-40W fluorescent lamps. Can also be made for 4, 6 or 10-40W lamps.



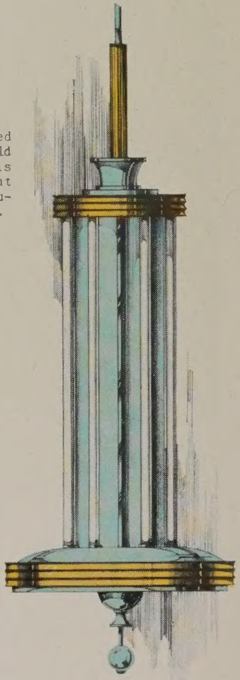
S42634 Gothic Church Fixture is finished in Gold, Bronze and Satin Cadmium. Other designs available in Romanesque, Colonial and similar styles. Exterior is lighted with 6-20W fluorescent lamps; bottom reflector uses incandescent lamps.



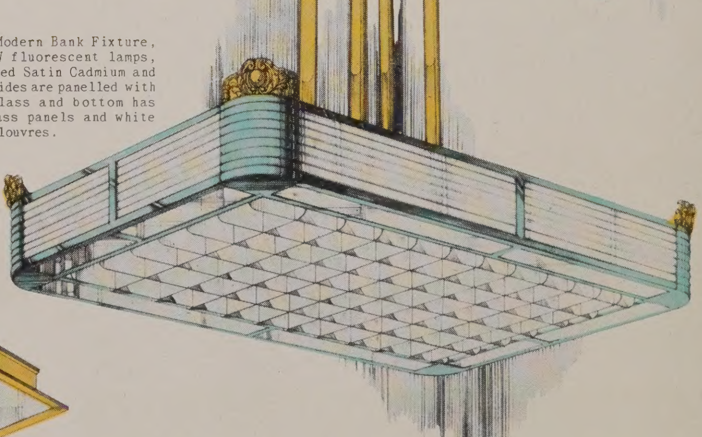
S42264 General Utility Luminaire of Modern Design, finished Gold and Satin Cadmium. 6-20W fluorescent lamps provide illumination.



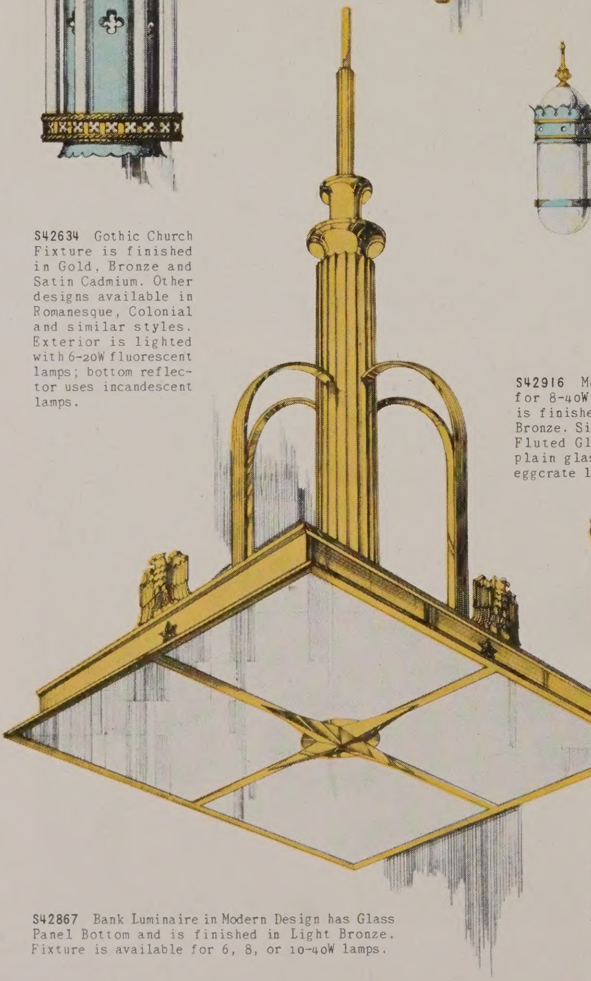
S42899 Gothic Style Church Fixture, finished in Old Iron, Gold and Satin Cadmium, uses 6-40W fluorescent lamps around sides. The Opal Globes and Reflector Bottom are illuminated with incandescent lamps.



S42769 Lobby Fixture, designed in Modern Style, is finished Gold and Satin Cadmium. Exterior is lighted with 6-30W fluorescent lamps and louvred bottom is illuminated with incandescent lamps.



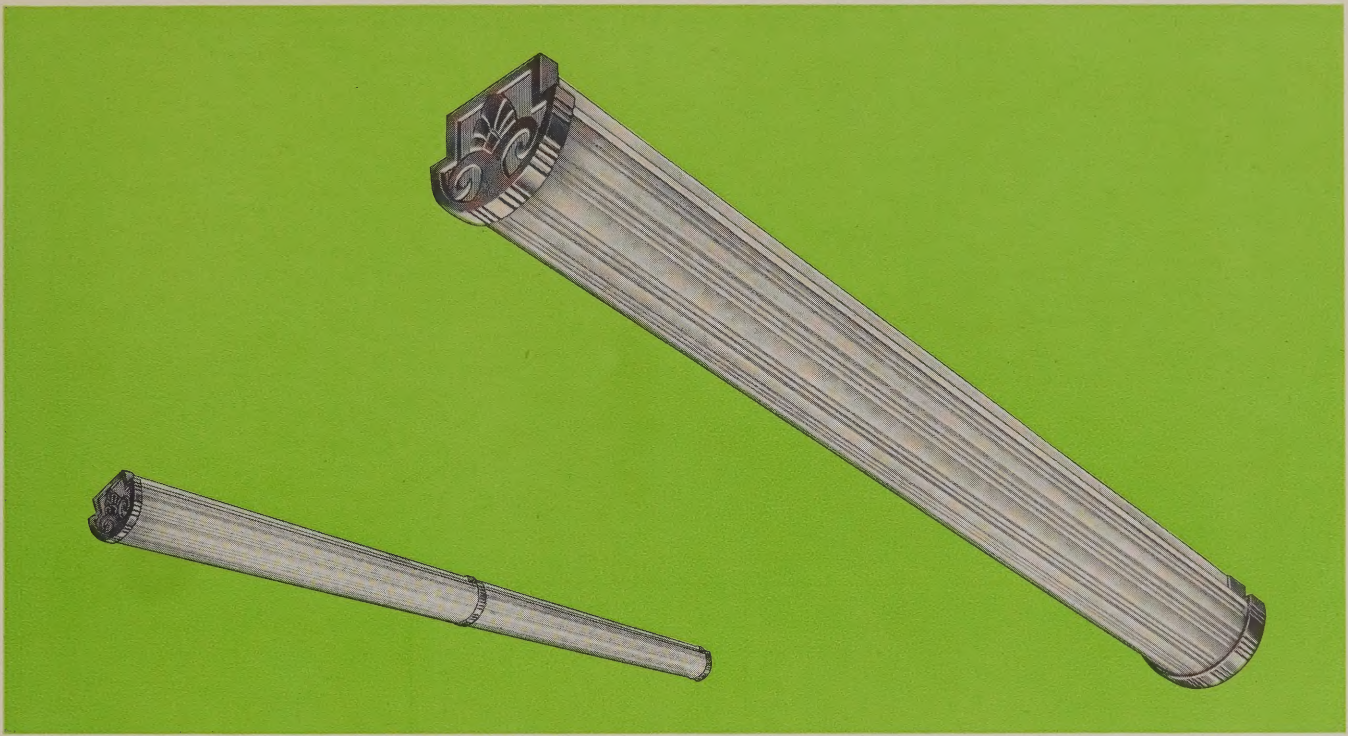
S42916 Modern Bank Fixture, for 8-40W fluorescent lamps, is finished Satin Cadmium and Bronze. Sides are panelled with Fluted Glass and bottom has plain glass panels and white eggcrate louvres.



S42867 Bank Luminaire in Modern Design has Glass Panel Bottom and is finished in Light Bronze. Fixture is available for 6, 8, or 10-40W lamps.

FREE DESIGN SERVICE Above are shown a few of the many GUTH Custom-Built Luminaire designs. Our Special Design Department has at its command a large variety of techniques, styles and finishes with which to create individual designs to harmonize with architectural treatments or fit specific requirements. Free Design Service is available to our Distributors and Dealers. When inquiring for prices, advise exact quantity involved, and send blue prints or complete description of area to be illuminated. Custom-Built Luminaires are listed and sold subject to availability of materials involved.

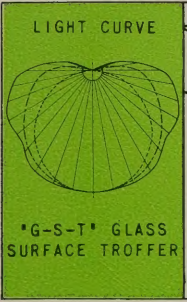
G-S-T GLASS SURFACE TROFFERS



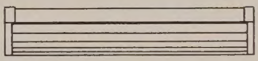
LISTED BY UNDERWRITERS' LABORATORIES, INC.

G-S-T—Guth "Glass Surface Troffers"—are totally enclosed luminaires for mounting direct to low- and average-height ceilings. Highly efficient and diffusive milk-white glass, decoratively molded, is held between ornamentive ends and joiners. Ingenious "Step-Lock" seats hold the glass; there are no screws—no springs—no bushings, simply slip the glass globe in place or take it out without use of tools or tension. G-S-T's can be mounted singly or continuously; only one wiring outlet is needed per unit or entire run.

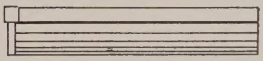
COEFFICIENTS OF UTILIZATION



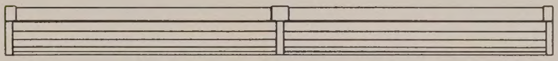
Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.28	.25	.23	.27	.25	.23
I	.34	.31	.30	.33	.30	.29
H	.37	.35	.33	.36	.34	.32
G	.40	.38	.36	.38	.36	.35
F	.43	.40	.38	.40	.38	.37
E	.45	.43	.41	.44	.42	.40
D	.49	.45	.43	.46	.44	.42
C	.50	.47	.44	.48	.44	.43
B	.52	.49	.47	.50	.47	.46
A	.53	.51	.49	.51	.48	.47



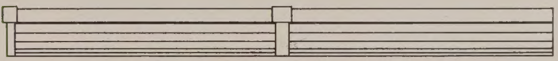
BASE SECTION
M2200-04



EXTENSION SECTION
M2201-05



BASE AND EXTENSION SECTIONS
M2202



DOUBLE EXTENSION SECTION
M2203

DESCRIPTION—G-S-T's consist of Neutrone Gray accessory channel, efficient "V" design reflectors finished "300° WHITE," ornamental ends or joiners, and efficient crystal-opal diffusing glass globes. Wired complete for 110-125 volt, 60 cycle, A. C. operation, High Power Factor. Listings below show Base and Extension sections. Base sections are used singly or as the Base unit for a whole run (comes complete with two ends). Extension sections are for use with Base units in Continuous Runs only (come with one joiner—no ends). M2202 and M2203 are wired with one Tulamp Ballast—connection of one lamp to be made on the job.

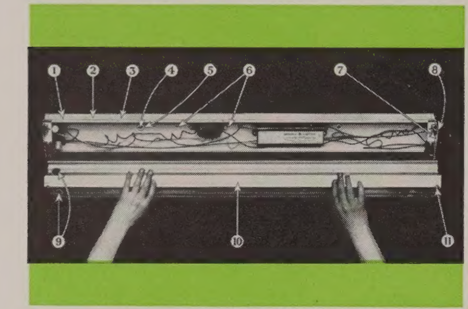
Cat. No.	Type	Rows of Lamps	Total Lamp Wattage	How Wired*	O. A. Lgth.	Width	Shp. Wt.	List Price	Code
M2200	Base	1	1- 40W	1-SLB	49⅛"	6¼"	40#	**$32.00**	OZYET
M2201	Extn.	1	1- 40W	1-SLB	49"	6¼"	39#	**30.00**	OZYIV
M2202	Base and Extn.	1	2- 40W	1-TLB	98⅛"	6¼"	79#	**61.00**	OZYOW
M2203	2-Extn.	1	2- 40W	1-TLB	98"	6¼"	78#	**59.00**	OZYUX
M2204	Base	2	2- 40W	1-TLB	49⅛"	8⅜"	46#	**41.00**	OZZAT
M2205	Extn.	2	2- 40W	1-TLB	49"	8⅜"	45#	**38.50**	OZZEV

*SLB denotes Single Lamp Ballast and TLB denotes Tulamp Ballast—All are High-Power Factor for 90% or better.

Guth FLU-O-FLECTORS . . . "Built Stronger to Last Longer"

TRADE MARK REGISTERED

ADVANTAGES OF GUTH FLU-O-FLECTORS . . . 13 "PLUS" FEATURES

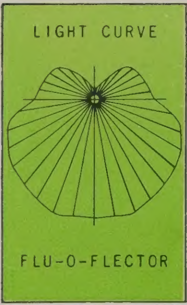


1. Heavy Gauge Steel Channels.
2. All steel parts are rust-protected.
3. Steel channel exterior is finished "300° Nuetrone Gray."
4. Swedged-in mounting nipples for ⅜″ stems or loops, on 10″ centers (except on 15-watt units).
5. The 36″, 48″ and 60″ units have K. O.'s on 25″ centers.
6. Universal knockout arrangement in Channels accommodates most standard accessory equipment.
7. Lampholders are mounted independently of Channel and Reflector—easily serviced.
8. Welded-on ornamental ends protect sockets, and insure their upright position. K. O.'s in ends for Locking Together, Continuous Wiring, and installation of Pull-Switches if desired.
9. Easy Access to Starter Switches.
10. Reflector engineered with "V" humps behind each lamp. Is finished "300° WHITE."
11. Reflector removable for easy servicing.
12. More light output.
13. Overall cost of wired FLUOFLECTORS, installed, is lower than for ordinary strip.

LIGHTING DATA

FLU-O-FLECTORS provide an effective yet inexpensive lighting system. The 2, 3, 4 and 6-row lamp units provide ceiling illumination as well as strong unshielded downlight. Coefficient table below is for the 2-row lamp units. Single row lamp units have about the same Coefficients. For the 3-row lamp units, multiply intensity of 2-row units by 1.3; for the 4-row lamp units, multiply intensity by 1.9.

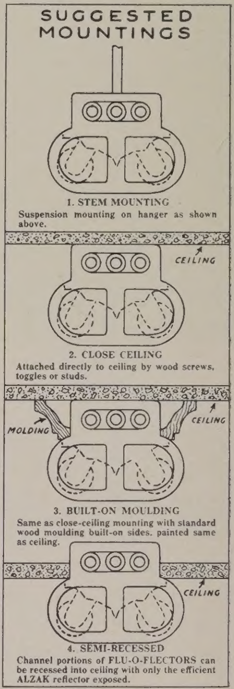
COEFFICIENTS OF UTILIZATION



Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.32	.27	.23	.32	.26	.23
I	.40	.35	.31	.39	.34	.30
H	.44	.39	.36	.43	.39	.35
G	.48	.43	.40	.46	.42	.39
F	.52	.47	.43	.50	.46	.42
E	.57	.52	.48	.55	.51	.47
D	.62	.56	.52	.59	.55	.51
C	.65	.59	.54	.62	.57	.54
B	.69	.63	.59	.65	.61	.58
A	.71	.66	.62	.67	.63	.60

SUGGESTED MOUNTINGS — Illustrations to right show the various mountings possible with FLU-O-FLECTORS. The 1, 2 and 3-row lamp units can be suspended. Special mounting nipples are provided in channel of Strips for suspended mountings with standard GUTH Hangers. K. O.'s in FLU-O-FLECTOR Channels afford convenient flush-ceiling mountings with wood screws, toggles or studs. With close ceiling mountings, a quite attractive appearance can be had by adding regular wood moulding, painted the same color as the ceiling, to the sides of the fixtures. Where desired, the FLU-O-FLECTORS may be semi-recessed in ceiling without causing maintenance or cleaning problems, for the accessories of the units are easily reached from below by removing reflectors. Recessed units should be held from above the ceiling with wire or conduit.

SUGGESTED MOUNTINGS



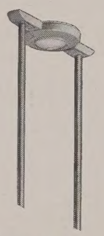
1. STEM MOUNTING
Suspension mounting on hanger as shown above.

2. CLOSE CEILING
Attached directly to ceiling by wood screws, toggles or studs.

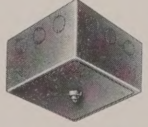
3. BUILT-ON MOULDING
Same as close-ceiling mounting with standard wood moulding built-on sides, painted same as ceiling.

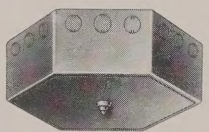
4. SEMI-RECESSED
Channel portions of FLU-O-FLECTORS can be recessed into ceiling with only the efficient ALZAK reflector exposed.

FLU-O-FLECTOR AUXILIARY PARTS


M1861

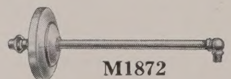
M350


M1865-66


M1867-68

M1870

M1871

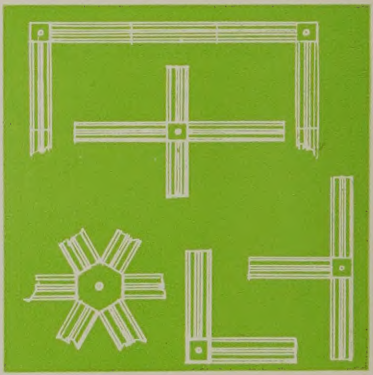

M1872

M1873
M1874

HANGERS—GUTH Single and Double Stem Hangers are Single point suspension type of heavy gauge steel finished to match fixtures. Swivel arrangement provides Alignment. M1861 is Double Stem Hanger for up to and including 3 40-watt fixtures; M1863 Double Stem Hanger for smaller units. M350 is Single Stem Hanger for use in continuous runs. Longer than standard lengths of Double Stem may be had at 80c list per foot or fraction; for longer Single Stem Hangers add 60c list per foot or fraction.

Cat. No.	Canopy Lgth.	Stem Centers	O. A. Lgth.	List Each
M1861	13¼″	10″	25″	**$4.50**
M1863	12″	10″	25″	**3.50**
M350	6″	. . .	25″	**2.50**

CENTER AND CORNER BOXES—FLU-O-FLECTORS may be artistically arranged on ceiling with standard GUTH CENTER and CORNER BOXES. At right are several suggestions. The BOXES are of steel, finished "300° WHITE" with Bottom Ornament. K. O.'s in sides permit easy installation and wiring.



Cat. No.	Shape	Use With	O. A. Size	List Each
M1865	Square	1 or 2-Lite	5¼″	**$3.80**
M1866	Square	3, 4 or 6-Lite	13″	**7.50**
M1867	Hexagonal	1 or 2-Lite	10¾″	**8.00**
M1868	Hexagonal	3, 4 or 6-Lite	26″	**16.00**

BRACKETS—Three styles of BRACKETS are available for special wall or localized lighting mountings with FLU-O-FLECTORS. Two BRACKETS are required for each fixture (unless tied in continuous-runs) and fastened in standard mounting holes or K. O.'s Finished to match fixtures.

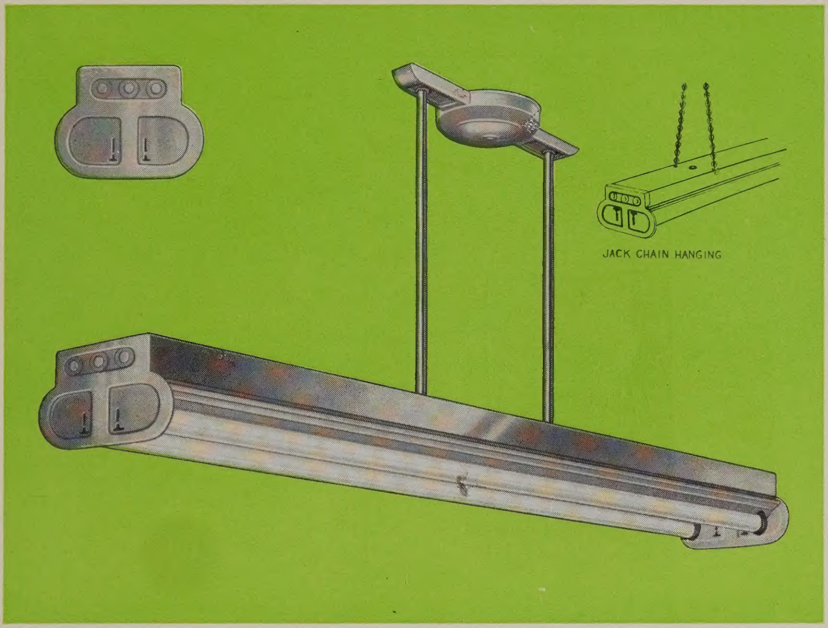
Cat. No.	Height or Lgth.	List Each
M1870	20″	**$5.00**
M1871	20″	**4.50**
M1872	20″	**4.50**

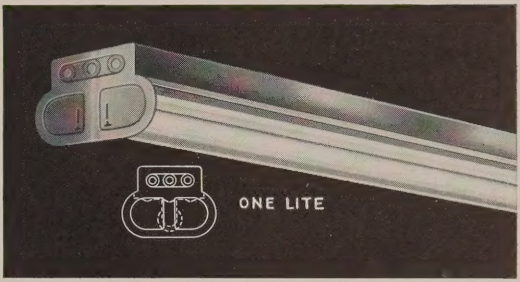
FITTER ATTACHMENT — FITTERS are made for attaching 18″ and 24″ fixtures to stem hangers. The attachments are finished to match FLU-O-FLECTORS and are sized for 4″ or 6″ fitters. FITTERS are not recommended for use with Chain Hangers.

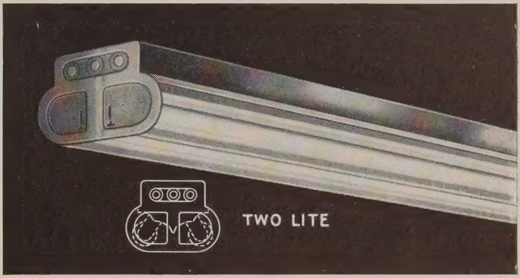
Cat. No.	For Fitter	List Each
M1873	4″	**$1.50**
M1874	6″	**1.75**

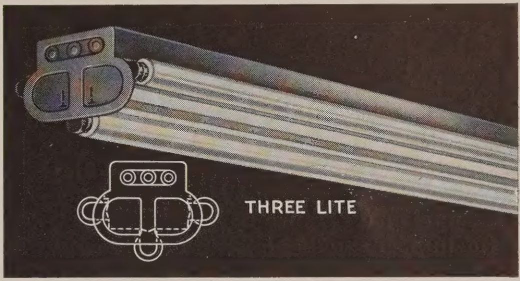
ADDITIONAL PARTS—A 10′ reinforced 2-wire cord and plug may be had wired onto fixtures for $1.25 list. Aluminum finished Jack-Chain, MP802, lists at 10c per foot. Reducer ½″ female to ⅜″ male, MP3003, lists at 25c each.

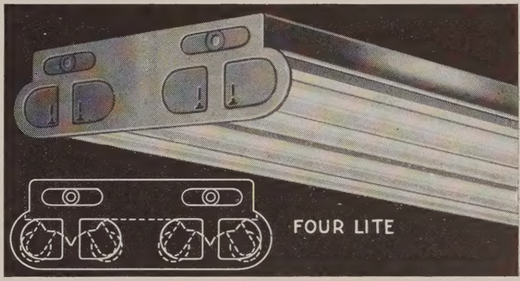
. . Supended Types . . . Also For Close Ceiling Mounting











LISTED BY UNDERWRITERS' LABORATORIES, INC.

THE FLU-O-FLECTORS

TRADE MARK REGISTERED

FLUOFLECTORS are ruggedly constructed Strip-Units. They are "stock-items" for use in hundreds of applications. As a General Lighting system, Fluoflectors can be installed singly or in continuous-runs, one butted against another; also for Localized Lighting, or behind coves, over work-benches, etc. Made for 1, 2, 3, 4 and 6 rows of lamps, the 1, 2 and 3 row units can be suspended from the ceiling on hangers (see above), and all types can be mounted directly to the ceiling. See page 24 for "Suggested Mountings" and decorative ceiling patterns when used with Center and Corner Boxes. Decorative ends protect the lampholders. Reflectors are designed for increased light reflection FLUOFLECTORS represent highest quality at lowest cost.

Cat. No.	Lamp Wattage	Lgth.	Width	Depth	Std. Crtn.	Crtn. Shp. Wt.	List Price	Code
M1632	1- 40W	48⅛″	5⅛″	4″	2	23#	**$14.70**	OZARP
M1634	1- 30W	36⅛″	5⅛″	4″	2	18#	**14.00**	OZATS
M1636	1- 20W	24⅛″	5⅛″	4″	2	12#	**10.60**	OZAYX
M1638	1- 15W	18⅛″	5⅛″	4″	2	10#	**10.20**	OZAZY
M2040	2-100W	60⅛″	7″	5″	2	55#	**$42.00**	OZBUZ
M2042	2- 65W	36⅛″	7″	5″	2	33#	**33.00**	OZCAW
M1640	2- 40W	48⅛″	5⅛″	4″	2	32#	**$19.25**	OZSIK
M1642	2- 30W	36⅛″	5⅛″	4″	2	28#	**18.50**	OZBEW
M1644	2- 20W	24⅛″	5⅛″	4″	2	16#	**14.70**	OZBIX
M1646	2- 15W	18⅛″	5⅛″	4″	2	14#	**14.20**	OZBOY
M1850	3- 40W	48⅛″	8″	5¼″	1	23#	**$31.00**	OZSOL
M1854	3- 20W	24⅛″	8″	5¼″	1	12#	**24.00**	OZCOZ
M1808	4- 40W	48⅛″	12¾″	4″	1	33#	**$39.50**	OZSUM
M1810	4- 30W	36⅛″	12¾″	4″	1	28#	**37.50**	OZDAX
M1812	4- 20W	24⅛″	12¾″	4″	1	17#	**31.00**	OZDEY
M1814	4- 15W	18⅛″	12¾″	4″	1	16#	**30.00**	OZDIZ
M2044	6- 40W	48⅛″	12¾″	5½″	1	50#	**$54.50**	PAJAV
M2046	6- 20W	24⅛″	12¾″	5½″	1	25#	**45.00**	PAJEW

NOTE: A charge of 50c list will be made for less than Standard Package or Carton.
Prices include full-freight allowance within the United States, on single-lot 100# shipments. Prices include Fluoflectors wired complete High-Power-Factor (90% or better) with Ballasts, Compensators where required and Starters, ready to install. Prices are less lamps.

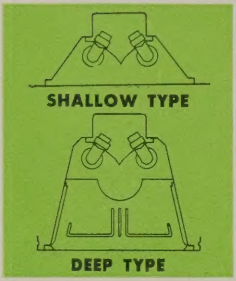
HANGERS—The one, two and three-lite units can be suspended from ceiling on Guth M1861 Double-Stem (single-point suspension) hanger. List $4.50—add 80c list per foot or fraction for longer than 25″ length. Guth M350 Single-Stem hangers List $2.50—add 60c list per foot or fraction for longer than 25″—are used two to a unit or one to a unit when units are run end-to-end with Stove-Bolts "tying" units together.

PULL SWITCHES—will be furnished at $1.50 list each. They are not wired in at the factory for convenient packing.

Guth SHALLOW TROFFERS . . . For Recessing Singly or in

U. S. PATENT 124998—OTHERS PENDING

FOR FLANGE AND TEEBAR MOUNTINGS



GUTH RECESS TROFFERS are available in two types of reflector design — Shallow Type (Page 27), and Deep Type (Page 28). Each has its specific advantages, and each is available for either Flange or Teebar Mounting.

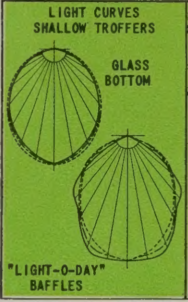
To left are cross-sections of the two types. Shallow Troffers require only about one-half the depth into the ceiling and are more efficient when used with Glass Bottoms. Shallow Troffers lend themselves to excellent advantage with "Light-O-Day" Baffles (Patented).

Deep Troffers are less efficient due to their depth, yet afford lamp-shielding at normal angles of vision which is desirable in Offices when diffusing glass bottoms are not used.

ESTIMATED ILLUMINATION DATA	Room Size	Foot-Candles With White Lamps 2-Watts/ Sq. Ft.	3-Watts/ Sq. Ft.	4-Watts/ Sq. Ft.
	10′ x 15′	12-15	19-22	25-30
	20′ x 40′	20-23	30-35	40-45
	60′ x 150′	25-28	38-42	50-55

LIGHTING DATA—Below are Coefficients of Utilization which can be used for Shallow Troffers when used with Flutex Glass Bottom (finished Satinol one-side) and also with "Light-O-Day" Baffles. Overall efficiencies of these two types are within 2% of one another. Light curves for each are shown below right. Maintenance factor for Glass Bottom types is .70; and for "Light-O-Day" Baffle types is .75.

COEFFICIENTS OF UTILIZATION



Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.25	.22	.20	.25	.22	.20
I	.31	.28	.27	.31	.28	.26
H	.34	.32	.30	.33	.31	.30
G	.36	.34	.32	.35	.34	.32
F	.38	.36	.34	.37	.36	.34
E	.41	.39	.38	.40	.39	.37
D	.44	.42	.41	.43	.42	.40
C	.45	.43	.42	.44	.42	.41
B	.47	.45	.44	.46	.45	.43
A	.48	.46	.45	.47	.46	.45

MOUNTING METHODS

GUTH TROFFERS are available for Flange or Teebar Mounting. The following suggestions may be of assistance.

FLANGE TYPE—This mounting is used in Plaster and Wood ceilings. Troffers are made with Flanges (see Figure A) which rest flat against the ceiling line. In wood ceilings, wood-screws are used to attach the fixture directly to the ceiling. For Plaster ceilings, a "Plaster Frame" is installed above the ceiling. This Plaster Frame can be of 2 x 4 lumber (as shown in Figure A), with an inside opening of 11¼″. The outer edge of the lumber should be "rabbited" (or 2 pieces of lumber can be used to get this edge), so the frame is supported on the ceiling lath, and bottom edge will be flush with the finished ceiling line. Flanged edges of the troffers then are secured to the 2 x 4 frame by wood-screws. Wood Plaster Frames provide neater and easier installation than metal plaster frames which are listed on the next page. When metal plaster frames are used, be sure they are installed perfectly true and spaced exactly or holes in Troffer Flanges might not line up with tapped holes in Metal Plaster Frame.

TEEBAR TYPE—Standard Teebar ridged edges are an integral part of the Troffers when ordered this way. These Troffer edges are similar to edges on standard acoustical tile blocks, and both edges are held together with Standard Teebars as furnished by various building material concerns. When this type mounting is used, we suggest that wire or conduit reinforce the suspension from above.

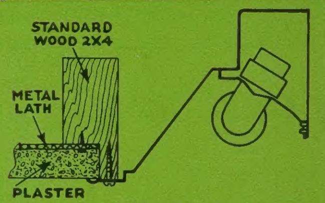


FIGURE A
CEILING FLANGE MOUNTING

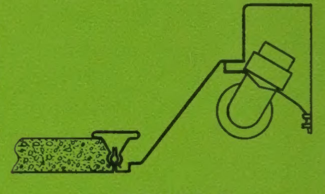
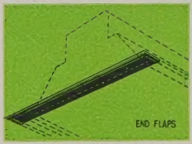
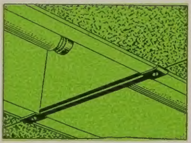


FIGURE B
TEEBAR MOUNTING



END FLAPS—M1847 End-Flaps shown to left, provide finished flanged appearance at the ends of Flange Mounting Type Troffers. One M1847 should be installed at the ends of each continuous run, or if units are mounted singly, on both ends of the unit. End-Flaps are screwed onto the ends at the job. M1847 End Flap, Code—PEHEG—List at 50c each.



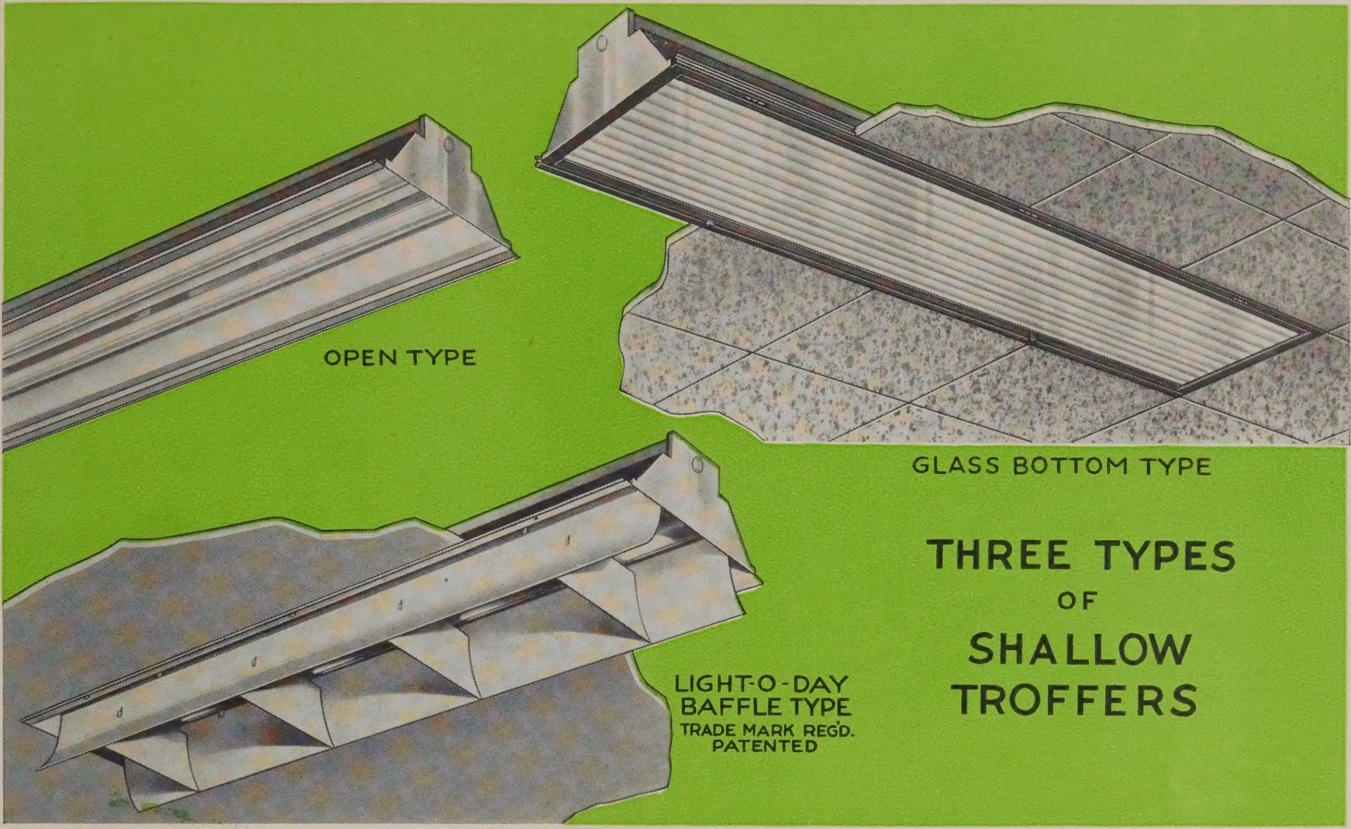
EDGE COVERS—M2288 Edge-Cover shown to left is used (if desired though not necessary) to cover edges of Flange Type Troffers butted one-against-the-other. Troffers are supplied with both ends welded on which is desirable for the Glass Frame types to keep Troffers and Frames in first-class condition in transit. Edge-Covers are installed on the job with screws. M2288 Edge-Cover, Code PEITY—Lists at 50c each.

TYPICAL GUTH SHALLOW TROFFER INSTALLATIONS

"Light-O-Day" Troffers, (M1840) installed in offices of **Little Rock Water Commission, Little Rock, Arkansas,** spaced on 10′ centers continuously (one-watt per square foot) on 12′ ceiling, Troffers deliver 25 to 30 foot-candles at desk level. Note excellent ceiling illumination.

Sales area of **East Tennessee Light & Power Co., Bristol. Tennessee-Virginia,** equipped with Flutex Glass Bottom GUTH Troffers (M1832). In 12′ ceiling using 4 watts per sq. ft., Troffers provide 70 F. C. 235 Troffers are installed in this building.

Smart note is added to the **Arden Shop, Louisville, Kentucky,** by GUTH RECESSED TROFFERS. Patented "Light-O-Day" Baffles used with the TROFFERS which are on a 14′ ceiling produce 35 F. C. of quality light and use only 2.2 watts per sq. ft.



LISTED BY UNDERWRITERS' LABORATORIES, INC.

SHALLOW TROFFERS

SHALLOW TROFFERS listed herewith are of three types—1. Open, 2. for Glass Bottom, and 3. with the new different "Light-O-Day" Baffles. Troffers are made for Individual Mounting or for Continuous Runs; knockouts in ends allow for locking together and continuous wiring. Each type is available for Flange or Teebar Mounting. Standard sections are of four-foot lengths, however fill-in sizes for 18", 24", and 36" lamps are available, prices dependent on quantity involved, upon request.

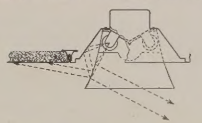
"LIGHT-O-DAY"—Here is *the different* type Troffer. Reflected illumination to the adjacent ceiling areas insures a bright cheery atmosphere. Made for two or three 40-watt lamp operation per four-foot section. The "Light-O-Day" feature is further described to right.

GLASS TYPE—Shallow Troffers are ideal for use with Glass Bottoms. More efficient, they provide high quality diffused illumination for Office areas and Stores. Flush, hinged frames hold the glass and are made so that the one-piece glass panel required, slides in or out easily. Shallow Troffers are also available for Prismatic Lens Panels, prices on request.

OPEN TYPE—Shallow Troffers of this type are ultra-efficient, however, due to their limited lamp shielding, are recommended only for high-ceilinged areas or for locations where lamp brightnesses are not objectionable.

DESCRIPTIONS—Troffers, Reflectors, Frames and Baffles are made of heavy-gauge steel finished "300° WHITE." Inner Reflector is removable from below so that accessories can be reached without removing entire fixture from the ceiling. Prices include fixtures wired complete, High-Power-Factor, for 110-125 volt, 60-cycle, A. C. operation. Special Recessed Fixture labels of Underwriters' Laboratories, Inc., are on the 2 40-watt TROFFERS.

New, Different
TROFFER LIGHTING



"LIGHT-O-DAY" BAFFLES ADD CEILING LIGHT

A major reason for 50 foot-candles in most Troffer installations is to enable light-rays striking lower areas, to be re-directed upward so ceiling is softly illuminated. "Light-O-Day" Baffles in GUTH TROFFERS (see sketch above) are engineered to softly illuminate the ceiling areas between rows of Troffers. More cheerful atmosphere is assured at lower wattages.

FOR FLANGE MOUNTING†

Cat. No.	Lamp Watt.	Type	Ceiling Hole Size	Shp. Wt.	List	Code
M1824	2-40W	Open	48⅛ x 11¼ x 5½"	26#	**$24.25**	OYVON
M1832	2-40W	For Glass*	48⅛ x 11¼ x 5½"	29#	**28.25***	OYVUP
M1840	2-40W	"L-O-D" Baffle	48⅛ x 11¼ x 5½"	33#	**28.75**	OYWAL
M1841	3-40W	"L-O-D" Baffle	48⅛ x 11¼ x 5½"	40#	**38.50**	OYDAT

FOR TEEBAR MOUNTING

Cat. No.	Lamp Watt.	Type	Ceiling Hole Size	Shp. Wt.	List	Code
M1822	2-40W	Open	48⅛ x 12 x 5½"	27#	**$24.25**	OYWEM
M1830	2-40W	For Glass*	48⅛ x 12 x 5½"	30#	**28.25***	OYWIN
M1838	2-40W	"L-O-D" Baffle	48⅛ x 12 x 5½"	34#	**28.75**	OYWOP
M1839	3-40W	"L-O-D" Baffle	48⅛ x 12 x 5½"	42#	**38.50**	OTGIJ

*Prices do not include glass. M1830 and M1832 require one-piece glass panel 47½" x 10½" x 7/32". Crystal Roughed, Flashed or Patterned Glass can be purchased locally to save freight, breakage, and packing. If desired, we will supply Flutex Glass, 1 to 29 panels, at $10.00 each list; 30 or more panels, $7.50 each list; or Excelux Glass, 1 to 29 panels, at $5.00 each list; 30 or more panels, $3.00 each list. All glass is priced F. O. B. St. Louis.

†Plaster Frames, size 48⅛" x 11⅛" made of iron, will be supplied at $4.00 list additional for Flange types. Finished outer frame size for Ceiling Flange Types is 48⅛" x 13". See "End Flaps," M1847 (page 26).

DEEP TROFFERS . . . *For Teebar and Flange Mountings*

Guth Deep Troffers are constructed of heavy-gauge steel to die-dimensions, are DeGreased, rust-protected, and finished with our highly efficient "300° WHITE." Inner reflector is removable from below for easy servicing of accessories — entire fixture need not be removed from the ceiling. Sections are priced complete with shielding baffles on 12″ centers, and with fixtures wired for 110-125 volt, 60 cycle A. C. High-Power-Factor. Prices include Starter Switches, also compensators where required. One and two 40-watt units bear Underwriters' Laboratories, Inc. Special Recessed Label.

Listings to right are complete for installation with exception of Joiner-Couplings and End-Flaps which are described to right and center of page. Runners for Teebar Types are not included in prices listed.

TROFFERS COMPLETE WITH BAFFLES★

Rows of Lamps	Catalog Nos. Flange Types		Catalog Nos. Teebar Types		For Total No. of Lamps	O. A. Lgth.*	How Wired**	Complete With***		Approx. Shp. Wt.	List Price
	No.	Code	No.	Code				Ends	Joiners		
1	**M2360**	PEBEZ	**M2380**	PEEJM	1	48⅛″	1-SLB	2	0	33#	**$22.65**
1	**M2361**	PEBIB	**M2381**	PEELP	1	48¹⁄₁₆″	1-SLB	1	0	32#	**21.75**
1	**M2362**	PEBOC	**M2382**	PEENS	1	48″	1-SLB	0	0	31#	**20.85**
1	**M2363**	PEBUD	**M2383**	PEEPT	2	96³⁄₁₆″	1-TLB	2	1	62#	**$40.00**
1	**M2364**	PECAZ	**M2384**	PEEVY	2	96⅛″	1-TLB	1	1	61#	**39.10**
1	**M2365**	PECEB	**M2385**	PEFAC	2	96¹⁄₁₆″	1-TLB	0	1	60#	**38.20**
2	**M2366**	PECIC	**M2386**	PEFED	2	48⅛″	1-TLB	2	0	36#	**$28.00**
2	**M2367**	PECOD	**M2387**	PEFIF	2	48¹⁄₁₆″	1-TLB	1	0	35#	**27.10**
2	**M2368**	PECUF	**M2388**	PEFOG	2	48″	1-TLB	0	0	34#	**26.20**
3	**M2369**	PEDAB	**M2389**	PEFUH	3	48⅛″	TL&SLB	2	0	41#	**$37.00**
3	**M2370**	PEDEC	**M2390**	PEGAD	3	48¹⁄₁₆″	TL&SLB	1	0	40#	**36.10**
3	**M2371**	PEDID	**M2391**	PEGEF	3	48″	TL&SLB	0	0	39#	**35.20**
3	**M2372**	PEDOF	**M2392**	PEGIG	6	96³⁄₁₆″	3-TLB	2	1	105#	**$69.00**
3	**M2373**	PEDUG	**M2393**	PEGOH	6	96⅛″	3-TLB	1	1	104#	**68.10**
3	**M2374**	PEEHL	**M2394**	PEGUJ	6	96¹⁄₁₆″	3-TLB	0	1	103#	**67.20**

★**OPEN BOTTOMS:** As stated above, each 4-foot section is priced complete with 3 Baffles, for lamp shielding at parallel angle. If Troffers are desired less baffles, please specify on order, and deduct $1.00 list per 4-foot section.

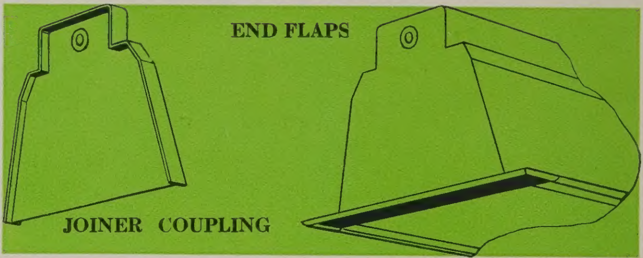
★**GLASS BOTTOMS:** Frames for glass bottoms in lieu of standard baffles can be supplied on above units: add $3.00 list per 4′ section extra. Glass panel required should be 47½″ x 10½″ x 7⁄32″. Glass not supplied by us, although listed—see Page 27.

★**EGGCRATE BOTTOMS:** Eggcrates for above units in lieu of standard baffles will be supplied at $7.00 list per 4′ section extra—Eggcrates must be ordered at same time as Troffers so Ends and Couplings can be made to accommodate them.

***OVERALL LENGTH** is given above. When extra Joiner-Couplings (M2399) are used, add 1⁄16″ each. For FLANGE TYPES the Troffer width is 11¼″; for TEEBAR TYPES the width is 12″, to fit into standard ceiling-blocks. Height for both types is 10½″. For FLANGE TYPES, small allowance should be made in ceiling hole for easy inserting. Finished outer frame-size for FLANGE TYPES is 13″. See "End-Flaps" at right.

****HOW WIRED:** SLB denotes Single Lamp Ballast (90% High Power Factor); TLB denotes Tulamp Ballast (95-100% High Power Factor); TL&SLB denotes one Tulamp and one Single Lamp Ballast (for 90% or better High Power Factor) to operate 3-40 Watt lamps. Where Tulamp Ballasts are supplied in units of longer than 48″ length, wiring connections of one lamp are made on job as units are shipped in 48″ lengths. Lampholders for odd lamps are pigtailed for easy wiring at job.

*****COMPLETE WITH:** Three types of each series are listed. Where 2 ends are included, units are complete (except for End-Flaps of Flange Types which may be desired—see to right). When ordering for Continuous-Runs, where one end or both ends are Open, it is necessary to figure in Joiner Couplings (see M2399 to right), one of which is required at each butt joint in continuous-runs.



JOINER COUPLING (Left): Same type is used on both Flange and Teebar types. One Joiner-Coupling should be used at each butt-joint. Joiners are included in several of above listings; count butt-joints in the run, check type units used, add extra joiners as needed.

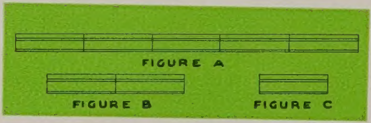
M2399—Joiner-Coupling—Code—PEHAF—List Each **$1.50.**

END-FLAPS (Right)—Use only on Flange Types. End-Flaps carry-out Flanged appearance at ends of units or runs. Are screwed onto unit ends at the job.

M1847—End-Flap—Code—PEHEG—List Each **$0.50.**

GUTH DEEP TROFFERS installed in the general offices of **Kuehne Mfg. Co.** Single Row Lamp units used in 10′ ceiling on 4′ centers—approximately 2.5 watts per sq. ft. produce 50-55 foot-candles at desk level. No louvres or joiners used in this installation.

Modern Drug Store of Winnberg & Batchellor, Jamestown, N. Y., equipped with 3-Row Lamp Troffers with Glass Bottom. Three 40W lamps per 4′ section (about 2.9 watts per sq. ft.) deliver 45 foot-candles at counter height.



HOW TO ORDER: For mounting Singly or in Continuous Runs, Guth Troffers are easily specified and ordered. Be sure to add price of M2399 Joiner-Couplings where needed. Typical examples are as follows:

For Figure "A": Shows 5-4′ units in run. For 1-Row lamp units (Flange Type) specify 2-M2364, 1-M2362 and 2-M2399 joiners. For 2-Row lamp units, specify 2-M2367, 3-M2368, and 4-M2399 joiners. For 3-Row lamp units, specify 2-M2373, 1-M2371, and 2-M2399 joiners. For Teebar types use Teebar catalog numbers.

For Figure "B": Shows 2-4′ lengths in run. For 1-Row lamp unit (Flange Type), specify 1-M2363; for 2-Row lamp units specify 2-M2367 and 1-M2399 joiner. For 3-Row lamp units specify 1-M2372. For Teebar types specify Teebar catalog numbers.

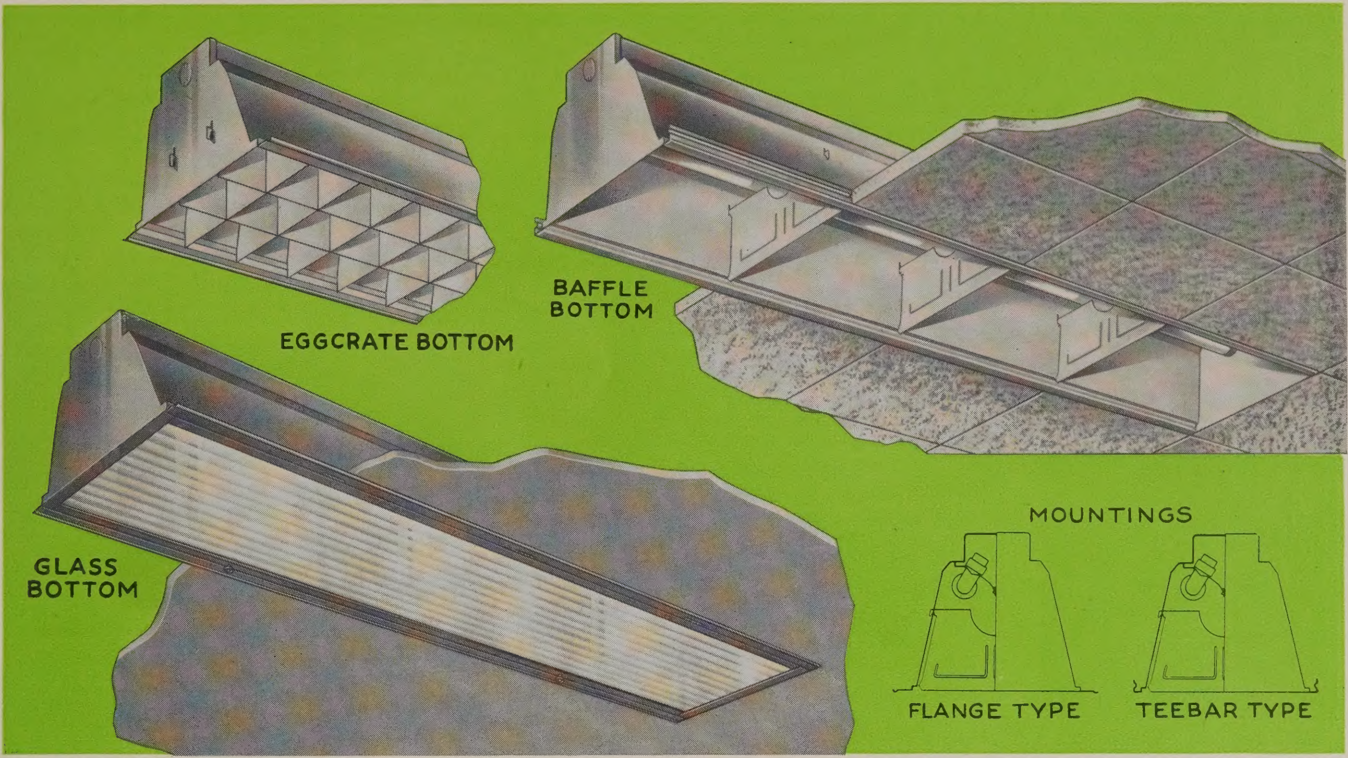
For Figure "C": Single 4′ unit (Flange Types), specify 1-M2360 or M2366 or M2369 as desired. For Teebar Types, specify Teebar catalog numbers.

Joiners and End-Flaps: Joiners are included in some of the above listed types, please note on table above. One joiner M2399 should be used at each butt-joint in both Flange or Teebar type runs. End-flaps are for Flange Types only and are not absolutely required but are available if desired.

Two-Row Lamp Troffers on 5′ x 6′ centers in 12′ ceiling produce 40 foot-candles in service on 220-volt, D. C., (this is equivalent to about 50 foot-candles on 110-125 volt A. C.). Polarity is changed daily with Double-Throw switch at the panel-board. (Special wiring circuit used here.)

Mansky & Son, Utica, N. Y., selected 3-Row Lamp Troffers with Glass Bottom, for their Fur Department. One Daylight and two White lamps per 48″ section (about 2.9 watts per sq. ft.) on 10′4″ ceiling, initially delivered 58 foot-candles.

. . . For One, Two and Three Rows of Lamps

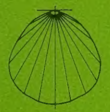
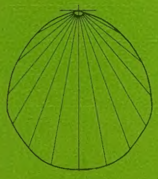
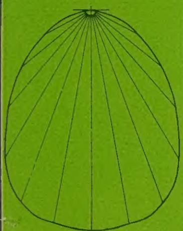


DEEP TROFFERS

See Preceding Page for Prices and Listings

GUTH DEEP TROFFERS are made for either Teebar or Flange mounting and in four types; 1. Open Bottom; 2. Baffle Bottom; 3. Glass Bottom; and 4. Eggcrate Bottom. DEEP TROFFERS are for Continuous or Single mounting arrangements and only one electrical outlet per unit or entire run is required.

COEFFICIENTS OF UTILIZATION

LIGHT CURVES DEEP TROFFERS	Ceiling	75%			50%		
	Walls / Room Index	50%	30%	10%	50%	30%	10%
 1-40W	J	.34	.30	.27	.34	.30	.27
	I	.44	.40	.38	.43	.39	.37
	H	.47	.42	.40	.46	.42	.40
	G	.49	.47	.45	.48	.47	.45
	F	.51	.48	.47	.50	.48	.47
	E	.56	.54	.52	.55	.53	.50
	D	.60	.58	.56	.59	.57	.55
	C	.61	.60	.57	.60	.58	.56
	B	.65	.63	.60	.63	.61	.59
	A	.66	.64	.61	.65	.62	.60
 2-40W	J	.32	.29	.26	.32	.29	.26
	I	.42	.38	.36	.41	.37	.35
	H	.45	.40	.38	.44	.40	.38
	G	.47	.45	.43	.46	.45	.43
	F	.48	.46	.45	.47	.46	.45
	E	.53	.51	.49	.52	.50	.47
	D	.57	.55	.53	.55	.54	.49
	C	.58	.57	.54	.57	.55	.53
	B	.62	.60	.57	.60	.58	.55
	A	.63	.61	.58	.62	.59	.57
 3-40W	J	.30	.26	.23	.30	.26	.23
	I	.38	.34	.32	.37	.33	.31
	H	.41	.37	.35	.40	.37	.35
	G	.43	.41	.39	.42	.41	.39
	F	.45	.42	.41	.44	.42	.41
	E	.50	.48	.45	.49	.46	.44
	D	.53	.51	.49	.52	.50	.49
	C	.54	.52	.50	.53	.51	.50
	B	.57	.55	.53	.56	.54	.52
	A	.58	.56	.54	.57	.55	.54

Listings on Page 28 are for standard lengths complete with Baffles. The Baffles of ornamental design shield the parallel angles of the lamp. These Baffles can be omitted, or hinged frames for glass can be furnished or finally, Eggcrate Louvres can be supplied.

Single row 40-watt units have 45° shielding at normal angle to the lamp and with GUTH Ornamental Louvres provide 30° shielding at angle parallel to the lamps.

Ornamental Louvre, shown in photographs, adds to the attractiveness of the installation as well as serving a functional purpose. Louvres "lift-in" or "lift-out" easily for relamping.

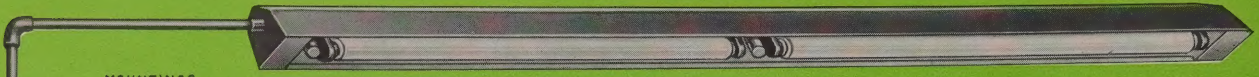
TEEBAR AND FLANGE TYPES: Deep Troffers — by Guth — are made for two type mountings. Both types are explained in full detail on page 26. Flange type is used in Plaster and Wood ceilings. The Teebar type is used in conjunction with Acoustical Ceilings or Teebar Snap-In Block construction. When Teebar Type is used, we recommend reinforced suspension by means of wire messengers or conduit.

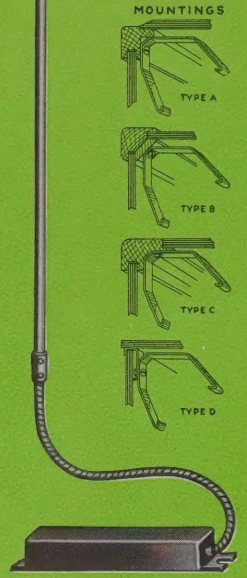
ESTIMATED ILLUMINATION DATA: Following is helpful computed data based on wattage per square foot and includes normal depreciation. Eggcrates, or efficient glass bottoms will reduce intensities by about 15-25%, whereas Open bottoms (less standard baffles) increases intensities by 5%.

		Foot-Candles With White Lamps		
Room Size	Type Troffer	1-Watt/ Sq. Ft.	2-Watts/ Sq. Ft.	3-Watts/ Sq. Ft.
10′ x 15′	1-Row Lamp	8-11	17-22	28-33
	2-Row Lamps	8-10	16-20	25-30
	3-Row Lamps	7- 9	15-18	23-27
20′ x 40′	1-Row Lamp	14-16	29-32	42-47
	2-Row Lamps	13-15	25-30	40-45
	3-Row Lamps	13-14	24-28	37-42
60′ x 150′	1-Row Lamp	18-20	35-40	55-60
	2-Row Lamps	17-19	34-38	52-57
	3-Row Lamps	16-18	30-35	45-50

EYE-TO-THE-FUTURE TROFFER LIGHTING: Increased illumination which may be desired at some later date is possible with GUTH TROFFERS when ordered this way. One Row Lamp Troffers can be constructed to add one or two rows of lamps per Section (add $2.00 list). Two Row Lamp Troffers are available made to take a third lamp (add $1.50 list). With this special Guth construction merely add accessories for the additional lamp or lamps operation.

Guth SHOWCASE FLUOFLECTORS *...Provide Full Light Coverage*





SHOWCASE FLUOFLECTORS provide full-light coverage for the average showcase. Lighting is uniform and brilliant. Reflectors are compact in design yet are efficient with their "300° WHITE" finish. The low-wattage Fluorescent lamps are three to four times more efficient than other type lamps, yet are 75% cooler—ballasts are placed below the showcase floor. Showcase Fluoflectors are furnished complete less lamps, and are easily installed. Special sizes and mitred corners are available, prices on request; send sketch showing exact dimensions required.

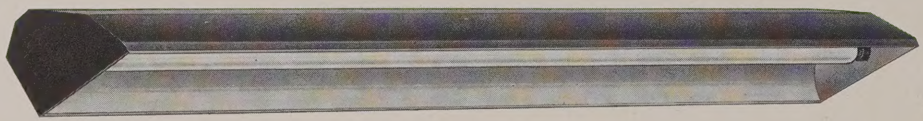
MOUNTINGS: Hanger Clips (to left) are furnished no charge with order, for attaching Fluoflectors to the case. Types A, B and C are the same Clip with three holes at different angles to attach units to various type frames in cases. These Hanger Clips are screwed to the wooden frames. This 3-Hole Clip is furnished unless Type D is specified. Type D Hanger Clip is used primarily for all-glass cases. Hanger Clips hold the Fluoflectors at proper angle for uniform lighting and also so lamps are concealed from view of customers and clerks.

Trade Avenues are "keyed" in stores where merchandise in cases are illuminated with GUTH SHOWCASE FLUOFLECTORS. Photo above shows GUTH SHOWCASE Units installed in large dry-goods establishment.

DESCRIPTION: Fluoflectors are of rigid steel construction with stamped closed ends and are finished lacquered Statuary Bronze. Other finishes available; prices on request. Prices include all necessary parts (less lamps) for operation on 110-125 Volt, 60 Cycle, A. C. Lampholders are wired with long leads for attachment thru tubing to ballast which is shipped in separate carton. Fittings furnished include 36″ down-tube, elbow, 30″ of flexible cable, Hanger Clips (see "Mountings" above), and steel housing for Ballast. Lampholders are snap-in Ejection type for easy insertion and removal of lamps.

Cat. No.	Lamp Sizes 18″	Lamp Sizes 36″	Fix. Lgth.	For Showcase Size	Shp. Wt.	List Price	Code
M1912	1	. .	24″	3′	8#	**$16.90**	OZOPS
M1914	. .	1	42″	4′ and 5′	14#	**22.50**	OZORT
M1916	1	1	62½″	6′ to 8′	22#	**33.50**	OZOWX
M1918	. .	2	81″	7′ to 10′	28#	**35.00**	OZOYB

Guth ALL-ANGLE WALLCASE FLUOFLECTORS

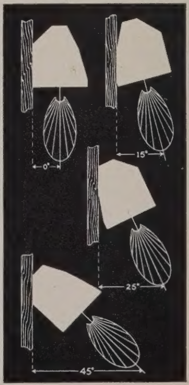


FLUOFLECTORS for Wallcases, Island and Niche Displays have unique housing construction which permits mounting on wall at one of four angles (right below) or on ceiling at various angles to insure best utilization of light. Wallcase FLUOFLECTORS are complete with all operating accessories self-contained. Flat ends with knockouts permit butting units end-to-end and provide their own continuous wireways.

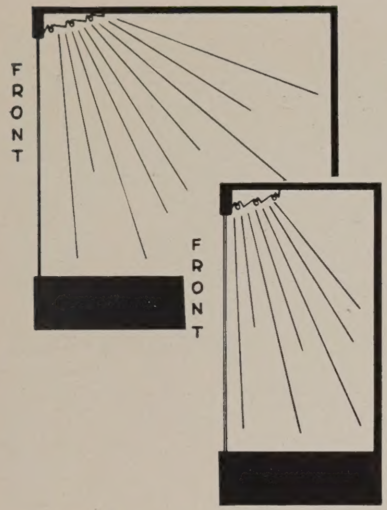
Increased "Eye-Appeal" is provided when selling displays are illuminated with Fluorescent Lighting. The installation to left of SHOWCASE and WALLCASE FLUOFLECTORS was made for the Ecker Studio at Salt Lake City, Utah.

Cat. No.	Lamp Watt.	Lgth.	Wdth.	Hght.	Shp. Wt.	Price	Code
M1710	1-15W	18¾″	4¾″	4⅞″	6#	**$15.00**	OZPAJ
M1711	1-20W	24¾″	4¾″	4⅞″	7#	**16.00**	OZPEK
M1712	1-30W	36¾″	4¾″	4⅞″	11#	**21.00**	OZPIL
M1713	1-40W	48¾″	4¾″	4⅞″	13#	**22.50**	OZPOM

DESCRIPTIONS: GUTH ALL-ANGLE WALLCASE FLUOFLECTORS are rigidly constructed of heavy-gauge steel with separate inner removable reflectors. Exterior, and reflector are finished "300° WHITE." FLUOFLECTORS are wired complete for 110-125 Volt, 60 Cycle, A. C., with 90% High-Power-Factor Ballasts, Lampholders and Starter. Toggle-switch, if desired, is $1.50 list additional.

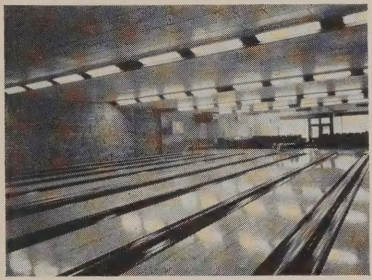


Guth S-W FLUOFLECTORS . . . For Show Windows, Bowling Alleys, Etc.



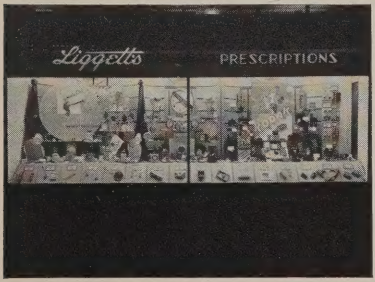
For Deep and Shallow Show Windows

Sketches above show light distributions possible for Deep or Shallow Windows. Simple "Turn-Around" Reflector feature is described in detail elsewhere on this page.



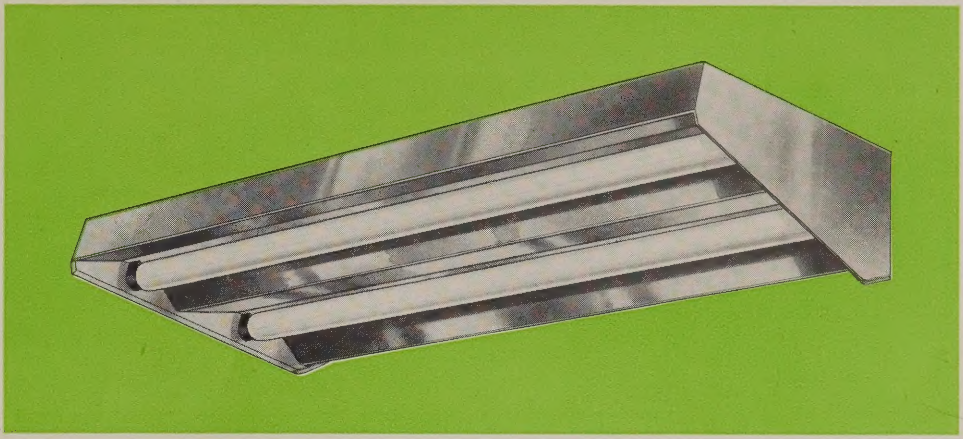
For Bowling Alleys

Photo above shows S-W FLUOFLECTORS installed in an up-to-date Bowling Alley. In this case (though it need not be) ceiling has been "stepped" with FLUOFLECTORS seated behind each "step" and therefore not visible from players' view. Broad light distribution of FLUOFLECTORS provides uniform lighting on the alleys.



Typical Show-Window

Illuminated brilliantly and uniformly with Guth FLUOFLECTORS installed behind window-valance. S-W FLUOFLECTORS can be butted end-to-end continuously. Knockouts in their ends provide continuous wireway; only one electric outlet required for each unit or run.



LISTED BY UNDERWRITERS' LABORATORIES, INC.

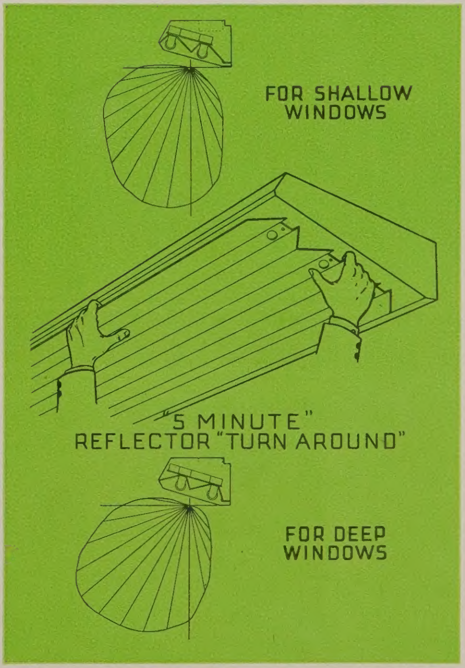
S-W Fluoflectors—by GUTH—are made in various sizes. They are used in Deep or Shallow Show-Windows (have "Turn-Around" reflector feature, see below) also in Bowling Alleys and for many other locations where Asymmetric light distribution is desirable.

"TURN-AROUND REFLECTORS" — This excellent feature provides two types of lighting distribution for each fixture. Reflectors are regularly positioned for Deep Type Show Windows (see at right below), however, same can be easily "Turned-Around" on the job for Shallow Type Windows—remove reflector, change position of mounting bar for correct lamp positioning, then reinsert reflectors. No wiring need be tampered with for this simple change. Besides this "Turn-Around" Reflector feature, each lamp has its own individual reflector for maximum output and light-control.

Cat. No.	Lamp Watt.	Depth and Width*	Shp. Wt.	Price	Code
M1681	2- 20W	5⅛x 9⅛″	12#	**$20.50**	OZMIJ
M1682	2- 30W	5⅛x 9⅛″	21#	**24.00**	OZMOK
M1683	2- 40W	5⅛x 9⅛″	24#	**25.75**	OZMUL
M1908	2-100W	8 x18″	50#	**73.00**	OZNAH
M1920	2- 65W	8 x18″	32#	**59.00**	OZNIK
M1686	3- 20W	6½x13½″	19#	**31.00**	OZNOL
M1687	3- 30W	6½x13½″	30#	**38.10**	OZNUM
M1688	3- 40W	6½x13½″	37#	**39.80**	OZOHK
M1691	4- 20W	7¾x18″	27#	**38.10**	OZOJL
M1692	4- 30W	7¾x18″	44#	**48.00**	OZOLN
M1693	4- 40W	7¾x18″	51#	**51.00**	OZOMP

*Lengths are ⅛″ longer than lamps with sockets which are 24″, 36″, 48″ and 60″.

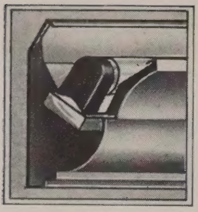
DESCRIPTION: S-W FLUOFLECTORS are constructed of heavy-gauge steel with removable reflectors. Lampholders are mounted on a movable bar which insures proper positioning of the lamps for the "Turn-Around" feature. Exteriors are finished "300° GRAY"; reflectors are finished "300° WHITE." FLUOFLECTORS are wired complete with High-Power-Factor (90% or better) Ballasts with built-in Compensators where required, white rotating-lock lampholders, and Starters. Operate on 110-125 Volt, 60 Cycle, A. C. Listed by Underwriters' Laboratories, Inc.



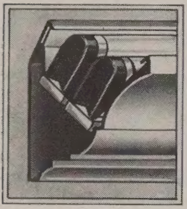
TURN-AROUND REFLECTORS

Above is shown simple method of turning reflectors around to obtain desired distribution of light. Two type distributions are shown above. Turning reflectors around does not require any wiring or rewiring — a simple 5-minute job — each lamp has its own individual reflecting surface for best light-control.

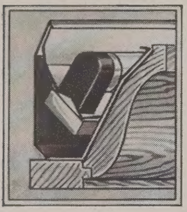
Guth COVE LIGHTING with FLUOFLECTORS



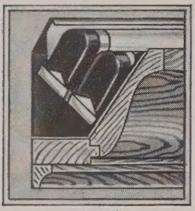
M1705



M1706



M1707



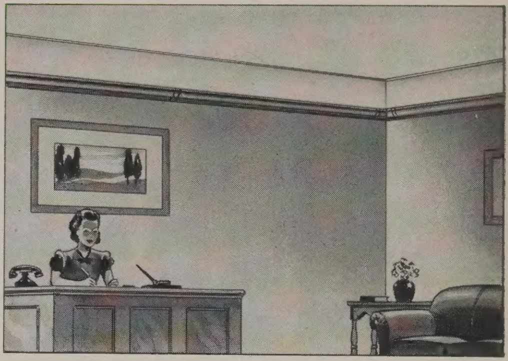
M1708

For 1 and 2 Rows of Lamps

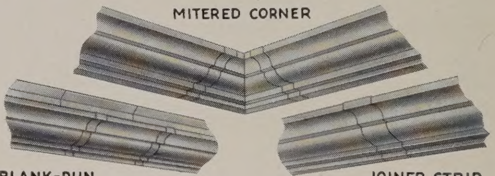
Refined indirect-lighting for small and medium Offices, Reception Rooms and Stores is produced with Cove FLUOFLECTORS. Made for all lamp sizes and in one or two row widths. EXPOSED TYPES are for mounting directly to wall. CONCEALED TYPES seat behind wood-moldings (not furnished) which can be purchased from building material firms. Cove FLUOFLECTORS are made to order for your area; if special sizes are required, sketch showing exact room dimensions should accompany order. Blank runs make up varying room sizes (see to right). Lengths and wiring most convenient to our manufacture are furnished. Cover Strips are furnished to cover joints of Exposed Type units.

DESCRIPTION—Formed of heavy-gauge steel. Exposed Types exteriors are lacquered Statuary Bronze; other finishes available. Concealed Types are finished in Prime Coat Gray. All Reflectors are finished "300° WHITE."

WHEN ORDERING: Specify Catalog Number and *designate whether same shall be Base or Extension* Type. Is furnished Base Type, unless specified differently. Price of Base Length includes two Ends which can be used in unit length or at each end of a continuous run. Price of Extension Length includes one Joiner Strip, no ends. If Cove FLUOFLECTOR is desired around entire room, send sketch showing exact dimensions; designate units where desired—also Blank Runs and Mitres, if desired.



Sketch above shows typical Exposed Type Cove FLUOFLECTOR installation. Mitred Corners and fill-in Blank-Runs (see below) for fitting exact room area. If special sizes are needed, send sketch showing exact dimensions with order.



MITRED CORNERS—For Exposed Typed only; not needed for Concealed Types.. Mitres extend 6″ in each direction from Wall Corner. List $6.00 each.

BLANK-RUN—For Exposed Types, $3.00 list per foot or fraction. For Concealed Types, $2.00 list per foot or fraction. Used to fill-in room dimensions for exact fit.

JOINER STRIPS—Are furnished to cover joints of Exposed Types when run continuously. Cove FLUOFLECTORS are furnished in lengths most convenient to our manufacture and Joiner Strips are furnished at no extra charge.

EXPOSED TYPES—Install on Wall in the Open

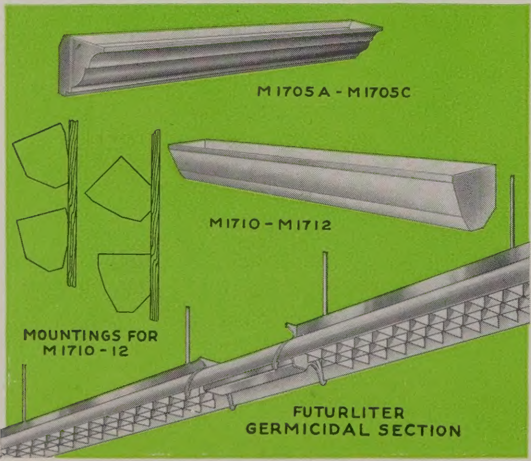
Cat. No.	Wired For	Lgth.	Wdth.	Hght.	Shp. Wt. Per Ft.	Prices Base Lgth.	Prices Extn. Lgth.	Code
M1705A	1- 15W	18¼″	4¼″	4 5/16″	5#	**$21.25**	**$17.10**	OZPON
M1705B	1- 20W	24¼″	4¼″	4 5/16″	5#	**24.25**	**20.00**	OZRAK
M1705C	1- 30W	36¼″	4¼″	4 5/16″	5#	**30.00**	**26.00**	OZREL
M1705D	1- 40W	48¼″	4¼″	4 5/16″	5#	**32.50**	**28.50**	OZRIM
M1705E	1-100W	60¼″	5½″	7½″	6#	**53.25**	**46.00**	PAPEC
M1706A	2- 15W	18¼″	5¼″	7″	6#	**$32.00**	**$27.25**	OZRON
M1706B	2- 20W	24¼″	5¼″	7″	6#	**34.50**	**29.75**	OZRUP
M1706C	2- 30W	36¼″	5¼″	7″	6#	**40.50**	**36.00**	OZSAL
M1706D	2- 40W	48¼″	5¼″	7″	6#	**43.00**	**38.50**	OZSEM
M1706E	2-100W	60¼″	8″	8½″	8#	**70.00**	**63.50**	PAPID

CONCEALED TYPES—For Mounting Behind Molding

Cat. No.	Wired For	Lgth.	Wdth.	Hght.	Shp. Wt. Per Ft.	Prices Base Lgth.	Prices Extn. Lgth.	Code
M1707A	1- 15W	18¼″	4⅛″	3¾″	4#	**$18.00**	**$14.80**	OZSIM
M1707B	1- 20W	24¼″	4⅛″	3¾″	4#	**20.50**	**17.30**	OZSOP
M1707C	1- 30W	36¼″	4⅛″	3¾″	4#	**26.00**	**22.75**	OZSUR
M1707D	1- 40W	48¼″	4⅛″	3¾″	4#	**28.50**	**25.25**	OZTAM
M1707E	1-100W	60¼″	5½″	6½″	5#	**49.50**	**43.50**	PAPOF
M1708A	2- 15W	18¼″	5¼″	6″	5#	**$26.25**	**$22.50**	OZTEN
M1708B	2- 20W	24¼″	5¼″	6″	5#	**28.75**	**25.00**	OZTIP
M1708C	2- 30W	36¼″	5¼″	6″	5#	**35.00**	**31.00**	OZTOR
M1708D	2- 40W	48¼″	5¼″	6″	5#	**37.50**	**33.50**	OZTOS
M1708E	2-100W	60¼″	8″	7½″	7#	**60.00**	**55.50**	PAPUG

Note: Above fixtures are wired for High Power Factcr—90% or better.

Guth GERMICIDAL LAMP UNITS *. . . Reduce Air Borne Bacteria*



FLUOFLECTORS for Germicidal Lamps are shown to left. For full information on the subject of reducing Air-Borne Bacteria in Offices, Schools, Hospitals, etc., and for proper installation suggestions, refer to General Electric Co. Folder No. Y-0174-R. The M1705AG and CG and the M1710 and 12 are for mounting to wall—see sketches to left. The M1710 and 12 can be mounted at various angles. Toggle-bolts or wood screws are recommended for mounting.

The M2112 is for use with suspended FUTURLITER lighting system (see pages 7-10). The M1705 A and C are lacquered Statuary Bronze and the M1710 and 12 are finished "300° WHITE."

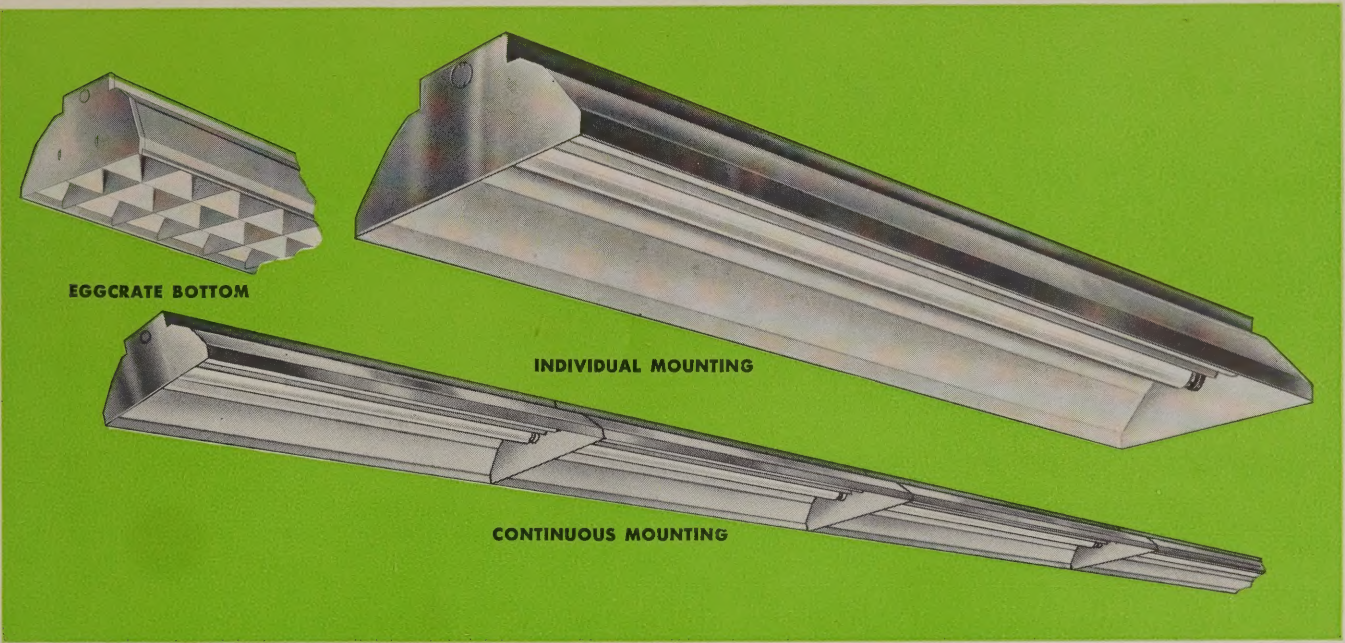
Cat. No.	Wired For	Lgth.	Shp. Wt.	List Price	Code
M1705AG	1-15W	18¼″	7#	**$21.25**	OZPON
M1705CG	1-30W	36¼″	12#	**30.00**	OZREL
M1710	1-15W	18¾″	6#	**15.00**	OZPAJ
M1712	1-30W	36¾″	11#	**21.00**	OZPIL

NOTE: The M2112 is listed on page 9. Lamps not included in prices.

Guth UTILITY FLUOFLECTORS . . . For 40 and 100 Watt Lamps

TRADE MARK REGISTERED

LISTED BY UNDERWRITERS' LABORATORIES, INC.



For General or Localized Lighting . . . Easily Installed

Utility FLUOFLECTORS are rugged industrial Reflectors for Low or Medium Bays. They are used for General or Localized Lighting, and may be used singly, or butted one-against-another, continuously.

Made for 2, 3 and 4 rows of 40-watt lamps, also for 2 100-watt lamps, they provide efficient lighting with their 88% Factor "300° WHITE" Reflectors. Separate inner reflector is removable from below for access to innards—entire fixture need not be taken down.

Light-cutoff is 72½° from bottom of lamps except on three and four lamp units. The 2 and 3 40-watt lamp sizes are available with Eggcrate lamp shields.

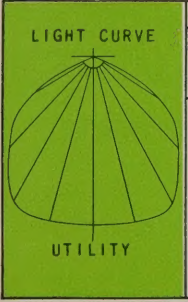
Cat. No.	Lamp Watt.	Lgth.	Wdth.	Depth	Shp. Wt.	List Price	Code
M1616	2- 40W	48⅛″	11″	6½″	25#	**$27.50**	OZKAD
M1888	3- 40W	48⅛″	11″	6½″	29#	**36.50**	OZKEF
M1624	4- 40W	48⅛″	18½″	6½″	47#	**48.00**	OZKIG
M1950	2-100W	60⅛″	13″	7½″	42#	**50.00**	OZKOH

DESCRIPTION: Made of heavy-gauge steel with exterior finished "300° GRAY." Reflecting surfaces of steel are finished "300° WHITE." Separate inner reflector removable from below for easy access to innards. Flat vertical ends for butting end-to-end and K. O.'s for continuous wiring. Swedged-in nipples on 10″ centers in top of housing; also K. O.'s on 25″ centers, and 5″ from each end.

WIRED—Utilities are wired for 110-125 Volt, 60 Cycle, A. C., complete with High-Power Factor (90% or better) Ballasts, built-in Compensators, and Starter Switches. Also available for 199-216 and 220-250 Volt, 60 Cycle, A. C., also 40-watt types for 220 Volt, D. C., prices upon request.

EGGCRATES—For M1616 and M1888, seat between ends in standard notched "Step-Locks." Eggcrates shield the lamps and confine the light to a smaller area. Cat. No. M2072 list $6.00 each in lots of six or more, or $7.25 list each for less than six ordered at one time.

COEFFICIENTS OF UTILIZATION

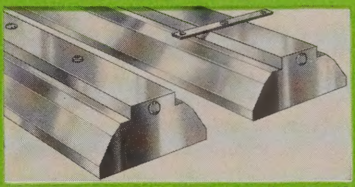


Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.34	.29	.24	.34	.29	.24
I	.42	.38	.34	.42	.37	.33
H	.46	.43	.39	.45	.42	.39
G	.50	.47	.43	.49	.46	.43
F	.53	.50	.46	.52	.49	.46
E	.58	.55	.51	.57	.54	.51
D	.62	.59	.56	.61	.58	.56
C	.64	.61	.58	.63	.60	.58
B	.67	.65	.63	.66	.64	.62
A	.69	.67	.65	.67	.66	.64

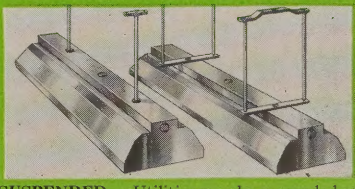
LIGHTING DATA

To left are Coefficients of Utilization to be used in determining foot-candle results with Utility FLUOFLECTORS M1616 and M1950. For M1888 multiply intensities of 2 40-watt units by 1.45; and for M1624 by 1.9.

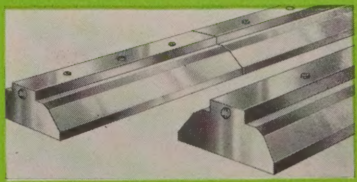
MOUNTINGS



MOUNTINGS—Close Ceiling Utility FLUOFLECTORS may be mounted directly to the ceiling by screws, toggle-bolts, etc., through the knockouts in top of channel, or the M2127 Bottom Hanger Strap shown above, list each. 75 cents can be used with nipple and lock-nuts for mounting.

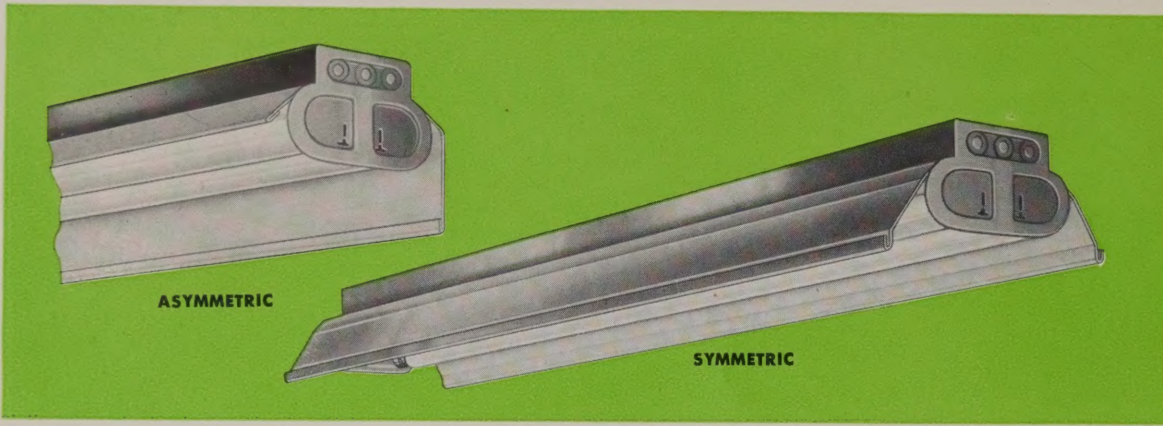


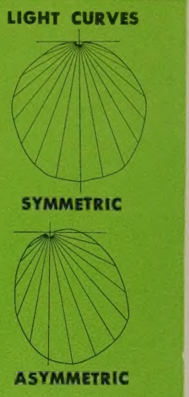
SUSPENDED — Utilities may be suspended on Conduit with Lock-nuts, using the K. O. holes on 25″ centers and 5″ from each end. Also ⅜″ threaded stems can be used in the swedged-in nipples on 10″ centers. In sketch above to right is shown an M2127 Bottom Hanger Strap, then 2—⅜″ stems, and an M2128 Top Hanger Strap. The M2127 Bottom Hanger Strap lists at 75 cents each, the M2128 Top Hanger Strap lists at $1.25 each. Single threaded ⅜″ stems of steel are available at 30 cents list per foot or fraction.



CONTINUOUS — Flat vertical ends are welded-on each Utility. This allows for flush-abuttment in Continuous Runs. K. O. in end provides for locking-together and continuous wiring.

Guth FLUOFLECTORS . . . "300° White" Reflectors





LISTED BY UNDERWRITERS' LABORATORIES, INC.

Symmetric and Asymmetric Types . . . 1 and 2 Rows of Lamps

SYMMETRIC REFLECTOR TYPES

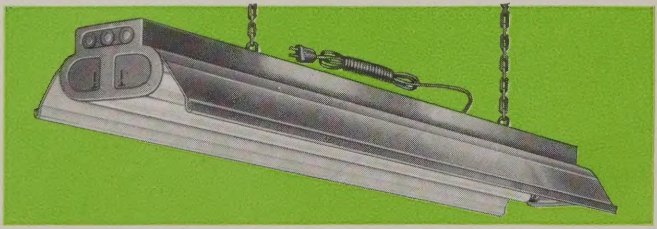
Cat. No.	Lamp Wattage	Lgth.	Wdth.	Hght.	Shp. Wt.	List Price	Code
M1648	1-40W	48⅛″	8¾″	4⅝″	14#	**$20.00**	OZKUJ
M1650	1-30W	36⅛″	8¾″	4⅝″	12#	**18.50**	OZLAF
M1652	1-20W	24⅛″	8¾″	4⅝″	8#	**14.00**	OZLEG
M1656	2-40W	48⅛″	8¾″	4⅝″	18#	**24.00**	OZLIH
M1658	2-30W	36⅛″	8¾″	4⅝″	16#	**22.25**	OZLOJ
M1660	2-20W	24⅛″	8¾″	4⅝″	10#	**17.75**	OZLUK

ASYMMETRIC REFLECTOR TYPES

M1877	1-40W	48⅛″	8¾″	7″	15#	**$20.25**	PAKEX
M1879	1-20W	24⅛″	8¾″	7″	9#	**14.00**	POKOZ
M1876	2-40W	48⅛″	8¾″	7″	19#	**24.00**	OZMAG
M1880	2-20W	24⅛″	8¾″	7″	11#	**17.75**	OZMEH

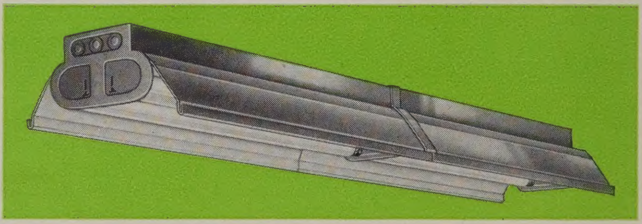
FLUOFLECTORS — with either Symmetric or Asymmetric Reflectors (see Light Curves to right above) — for multiplicity of uses — are made in one and two lamp sizes and solve many lighting problems. Symmetric reflectors can be used for general illuminating purposes, or for localized lighting over benches, presses, etc. Asymmetric reflector types are for use in rug displays, wall-cases, bowling alleys, show-windows, etc. "PFC" Plastics can be used in conjunction with FLUOFLECTORS (see pages 20 to 21). Reflectors are efficient "300° WHITE" and are removable for access to innards. Welded-on ends protect sockets, and insure their upright position; ends have combination knockouts for locking together and for wiring in continuous runs.

DESCRIPTIONS: FLUOFLECTORS listed above are heavy-gauge steel channel with welded-on ends; finished "300° GRAY." Reflectors are finished efficient "300° WHITE." Units are wired complete with High-Power-Factor (90% or better) Ballasts for 110-125 Volt, 60 Cycle A. C., built-in Compensators where needed, White Lampholders, and Starter Sockets. Packed one to a carton. Reflectors are removable for access to innards. Swedged-in nipples for ⅜″ threaded stem on 10″ centers. Knockouts for other type mounting are on 25″ centers (except on 20-watt units). See Page 24 for various extra parts. M1877 and 79 are identical to M1876 and 80, respectively, except wired for only one-lamp instead of two; a second lamp can be operated in them at later date by adding accessories.



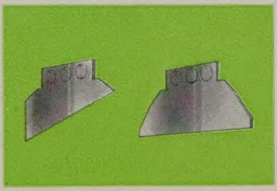
JACK CHAIN HANGER—CORD AND PLUG

FLUOFLECTORS can be supplied complete with 4′ Jack Chain Hanger with loops, and wired with 4′ reinforced Cord and Plug as shown above. Cord is 2-wire conductor. When ordering specify "With M1883 Assembly." Add $2.00 to price of FLUOFLECTOR.



JOINER STRIPS

When installing FLUOFLECTORS in continuous runs, end-to-end, it is desirable to use Joiner Strips shown above to align reflectors and cover the joints. When ordering, specify M1884 for Symmetric Reflectors, and M1885 for Asymmetric Reflectors. These Joiner Strips list at $1.20 each. Finished same as reflector.



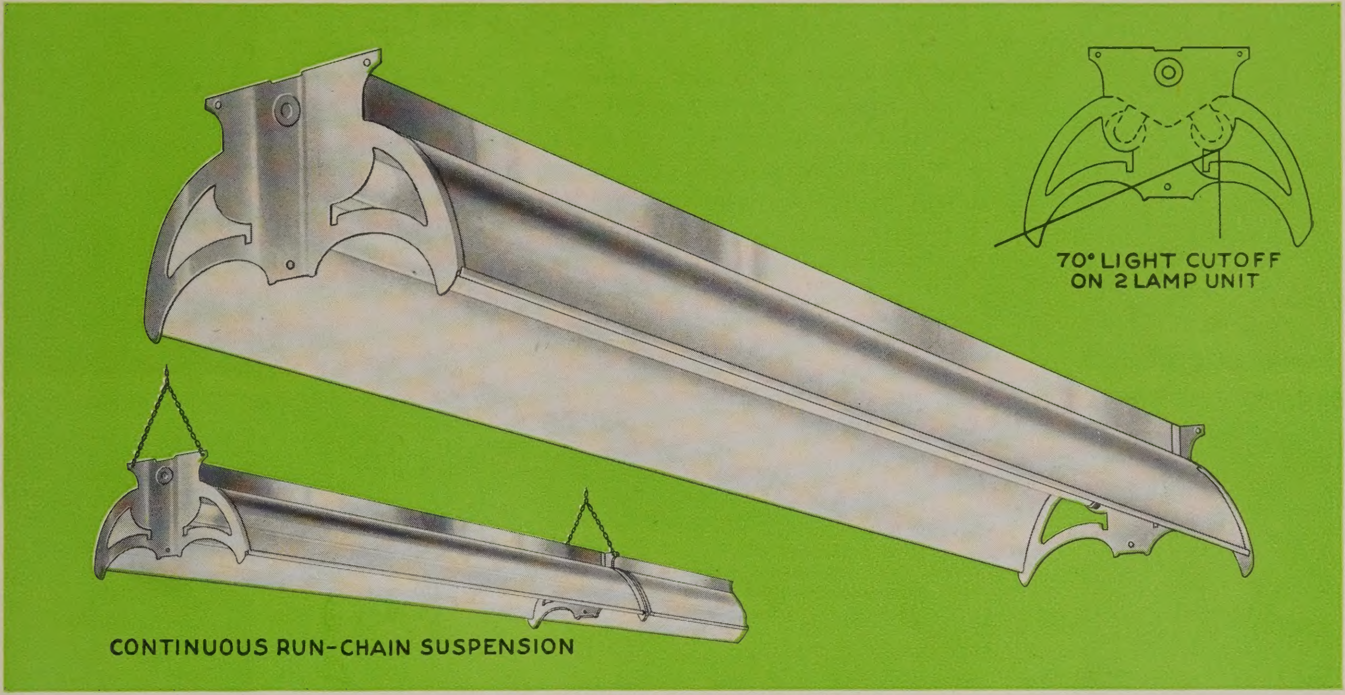
CLOSED ENDS

FLUOFLECTORS can be obtained with completely closed ends, see to left. The ends must be applied at the factory as they are welded on direct to the channel. Finished same as Channel. Specify M1886 for Symmetric Reflectors and M1887 for Asymmetric Reflectors. Each end lists at 75 cents.

OTHER PARTS

Hangers, brackets and hanger fittings for FLUOFLECTORS are available (see page 24).

Guth X-L-O FLUORESCENT . . . *Industrial Luminaire*



LISTED BY UNDERWRITERS' LABORATORIES, INC.

One-Piece Porcelain Enamel Reflector—"Eye-to-the-Future" Lighting

X-L-O FLUORESCENT — the new Guth Porcelain Enameled unit provides General and Localized lighting for Industrial areas. For Individual or Continuous Arrangements, X-L-O's provide a wide-range of lighting intensities as desired. With uniform distribution of light at normal angle, parallel and at 45° angle to lamps, X-L-O assures good vertical as well as horizontal illumination. Light cutoff for 2 40-watt units is 70°.

"EYE-TO-THE-FUTURE": X-L-O's are available initially wired for two or three 40-watt lamps. Two-lamp units are constructed so that a third lamp can be operated in the unit if increased illumination may be desired at later date. Merely add Ballast, Lampholders and Starter for 45% more light.

MOUNTINGS — X-L-O's can be mounted with conduit or chain suspension, or by using K. O.'s in top, can be mounted direct to ceiling. Mounting holes in ends allow double-chain (see photo above) suspension. Swedged-in ⅜″ nipples are on 10″ centers and ⅞″ knockouts are on 25″ centers, and 5″ from each end.

CONTINUOUS-RUNS — X-L-O's have flat-vertical ends which permit flush-abuttment of units for continuous-runs. Holes in ends permit use of Stove-Bolts for tying units end-to-end. Knockout in ends permits continuous wiring; only one electric outlet is required for each unit or run. X-L-O's are furnished only in 4-foot lengths for easy one-man installation.

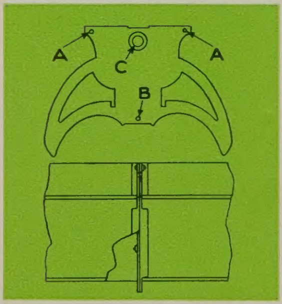
Cat. No.	Wired For	Lgth.	Wdth.	Hgth.	Shp. Wt.	List Price	Code
M2400*	2-40W	48⅛″	12½″	8½″	33#	**$27.50**	PAJUZ
M2401	3-40W	48⅛″	12½″	8½″	40#	**36.50**	PAKAW

*The M2400 is constructed to accommodate Ballast, Lampholders and Starter for third 40-watt lamp, if increased illumination is desired at later date.

DESCRIPTION: Units are wired for 110-125 Volt, 60 Cycle, A. C. High-Power-Factor (95-100% on Tulamp unit, and 90% or better on three-lamp). If specified on order, X-L-O's will be wired for 199-216 or 220-250 Volt, 60 Cycle, A. C., at same prices. For 110-125 Volt, 50 Cycle, A. C., add $2.65 list; for two-lamp unit; add $7.05 list for three-lamp unit.

CONTINUOUS-RUNS

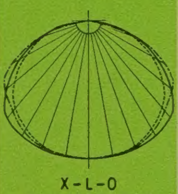
X-L-O's have flat-vertical ends which allow flush-abuttment of units for Continuous Runs. Sketch to right shows two units butted one against the other. End-view to right shows standard top-holes (A) for chain suspension. Bottom hole (B) permits use of Stove-Bolts for tying units together for Continuous Runs. Knockout (C), with nipple, affords continuous wireway (only one outlet needed for an entire run).



X-L-O's consist of heavy-gauge steel accessory channel, one-piece Porcelain Enameled Reflectors, and two ends which are welded to channels. Reflectors are removable. Exterior finish is standard Guth-Gray.

COEFFICIENTS OF UTILIZATION

LIGHT CURVE



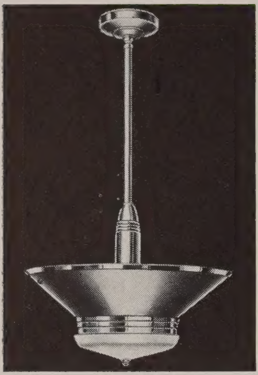
X-L-O
FLUORESCENT

Ceiling	75%			50%		
Walls / Room Index	50%	30%	10%	50%	30%	10%
J	.37	.32	.28	.37	.32	.28
I	.46	.41	.38	.45	.40	.37
H	.50	.46	.43	.49	.46	.43
G	.54	.50	.47	.53	.50	.47
F	.58	.54	.50	.56	.52	.50
E	.62	.59	.56	.61	.58	.56
D	.67	.64	.60	.65	.63	.60
C	.69	.66	.63	.67	.64	.63
B	.72	.69	.67	.70	.68	.66
A	.74	.71	.69	.72	.69	.68

Guth INDIRECTS and DIRECT-INDIRECTS

INDIRECT LUMINAIRES

The remarkable efficiency of Guth Commercial Lighting Fixtures for Incandescent Lamps is due to carefully engineered ALZAK★ reflectors, that give maximum reflectivity and life-time permanence. The Luminaires below have self-aligning hangers. Exteriors are Emery Grained with Polished bands finished ALZAK★ for lasting beauty.



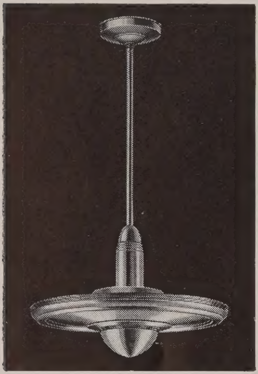
● **SUPER ILLUMINATOR**

GUTH SUPER ILLUMINATOR* — has smart, business-like appearance with excellent upward light-distribution for spacings up to 11 feet. Glass bottom bowl lighted thru tiny windows softly illuminates exterior.

Cat. No.	Wattage	Dia.	Lgth.	Price	Code
R-4355	200- 300	14″	30″	**$12.50**	POKE
R-4357	300- 500	18″	36″	**16.00**	POLY
BP-4357	750-1000**	18″	42″	**18.00**	OSWAS

**BiPost lamps.

*U. S. Patents: 89,091; 1,962,067; 1,962,068; 1,962,069.

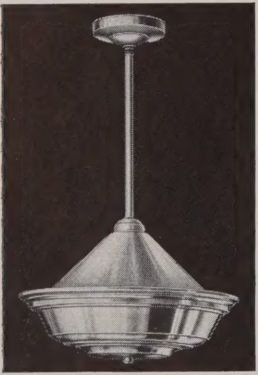


● **WINDSOR**

GUTH WINDSOR, totally indirect luminaire, with spill of light illuminating its bottom portion, is engineered for wide spread of light and is excellent for wide spacings and low ceilings. Attractively styled for modern offices, schools, and store.

Cat. No.	Wattage	Dia.	Lgth.	Price	Code
R-6570	200- 300	16″	30″	**$12.50**	EDDY
R-6571	300- 500	18½″	36″	**16.00**	ELLIE
BP-6571	750-1000**	18½″	42″	**18.00**	EMBANK

**BiPost lamps.



● **OPTILUX**

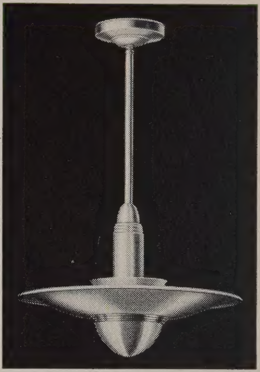
Patented GUTH OPTILUX* completely solves the maintenance problem of indirect luminaires with special "lens-design" glass cover which minimizes accumulation of dust and dirt. "Optilux" glass-cover has low surface brightness, efficient diffusion, and high light transmission. Reflector is ALZAK★.

Cat. No.	Wattage	Dia.	Lgth.	Price	Code
Optilux 3	200- 300	14″	30″	**$15.75**	OPLETE
Optilux 5	300- 500	18″	36″	**21.00**	OPLUME
Optilux 10	750-1000**	18″	42″	**23.00**	OBIPE
Optilux 30†	200- 300	15¼″	30″	**15.75**	PRIVET
Optilux 50†	300- 500	19″	36″	**21.00**	PROBITY
Optilux 100†	750-1000**	19″	42″	**23.00**	PROD

**BiPost lamps.

*Trade Mark Registered—U. S. Patents 106,593; 1,791,126; 2,132,784.

†Optilux 30, 50 and 100 have different bottom reflector design; are quite similar to Zephyr reflector.

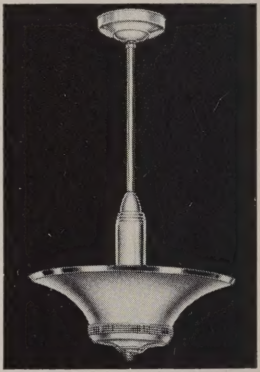


● **ZEPHYR**

GUTH ZEPHYR is designed to effect high intensity lighting with very wide light distribution. Due to the wide light curve, it is possible to space the Zephyr farther apart than conventional luminaires. The Zephyr is also very effective for low ceiling installations.

Cat. No.	Wattage	Dia.	Lgth.	Price	Code
R-6381	200- 300	16″	30″	**$12.50**	ZEALOT
R-6286	300- 500	19″	36″	**16.00**	ZONE
BP-6286	750-1000**	19″	42″	**18.00**	ZULU

**BiPost lamps.



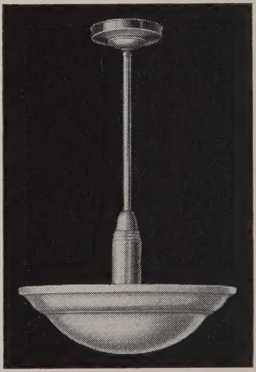
● **YORK**

GUTH YORK*, smart and modern appearing, is equally appropriate for office and store installation, and efficiently provides high intensity indirect lighting for eye-ease and comfort. Though entire reflector is of aluminum metal, exterior is softly illuminated producing an opalescent illusion.

Cat. No.	Wattage	Dia.	Lgth.	Price	Code
R-5441	200- 300	14″	30″	**$12.50**	SKIM
R-5442	300- 500	18″	36″	**16.00**	SLAB
BP-5442	750-1000**	18″	42″	**18.00**	OSVUW

**BiPost lamps.

*U. S. Patent 97,934.



● **INDIRECT-LITE**

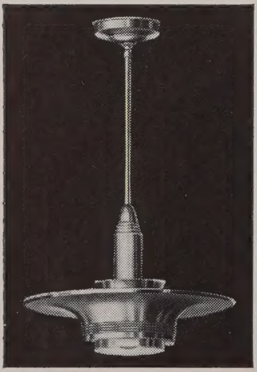
GUTH INDIRECT-LITE is trimly styled and carefully designed to produce efficient indirect illumination. Steel reflector is finished Porcelain Enamel, inside All-White, outside Ivory. Swivel hangers and socket cover are ALZAK★.

Cat. No.	Wattage	Dia.	Lgth.	Price	Code
R-5354	150	10″	25″	**$ 9.00**	LOTUS
R-5355	200-300	14″	30″	**10.00**	LOYAL
R-5357	300-500	18″	36″	**12.50**	LUNGE
BP-5357	750-1000*	18″	42″	**14.50**	LURCH
R-5359	750-1500	22″	42″	**19.00**	LYRIC

*BiPost lamps.

DIRECT-INDIRECT TYPES

GUTH DIRECT-INDIRECT Luminaires are designed for commercial applications where strong downlight, supplemented by complimentary indirect illumination, is desired. ALZAK★ Reflectors give these luminaires high efficiency and long life.

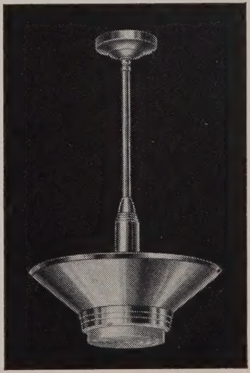


● **MOROLUX**

GUTH MOROLUX* for Silver-Bowl lamps produces wide upward light plus strong downward light, by means of separate ALZAK★ inner reflector. Recommended for sales areas in stores. Streamlined appearance and ALZAK★ finished.

Cat. No.	Wattage	Dia.	Lgth.	List Price	Code
R-6726	300-500	19″	36″	**$18.75**	PAKOB

*U. S. Patent No. 2,262,582.



● **SUPER DIRECT-INDIRECT**

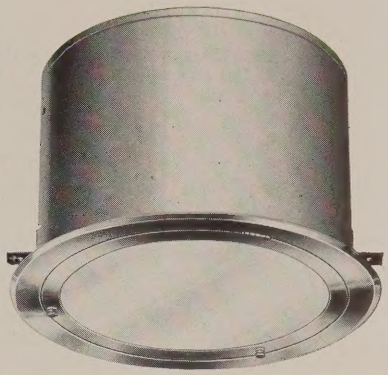
GUTH SUPER DIRECT-INDIRECT—direct-indirect fixture provides strong downward light and builds up light intensities between fixtures with its indirect lighting component. In stores, the fixture provides beautiful illumination with strong light on the merchandise. Also used in offices where strong downlight is desired.

Cat. No.	Wattage	Dia.	Lgth.	List Price	Code
R-6004	200	14″	30″	**$13.75**	PALEY
R-6005	200-300	14″	30″	**16.00**	PALIZ
R-6006	300-500	18″	36″	**16.50**	PALOB

★Trade Mark Registered ALCOA.

Fixtures listed on this page are F. O. B. St. Louis—No freight allowed

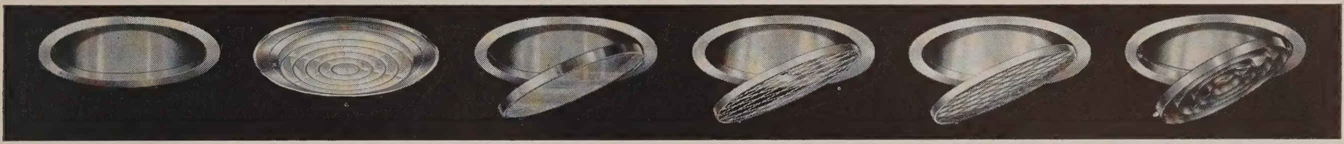
Guth RECESSED LIGHTING UNITS . . . For Filament Lamps



Recessed Lighting Units for Filament lamps provide strong down-lighting and provide clean Architectural appearance. Effectively used in Department Stores, Jewelry Stores, Sport Areas and many other locations either in combination with general illuminating luminaires, or alone. When Recessed Units are the sole method of lighting, higher intensities are suggested to obtain some ceiling light by redirection from the lower areas.

Guth Recessed Units are available in six types, each type of two sizes. Candle-power and distribution curves available. Units listed below bear Underwriters' Laboratories, Inc. Special Recessed Fixture Label.

DESCRIPTION: All types are of similar construction complete with heavy-gauge steel outer housing (with wiring K. O.'s) with rust-protecting plate. Removable Semi-Concentrating reflector is made of aluminum and finished genuine ALZAK for high efficiency and permanence. Ceiling flange ring is of steel and finished "300° WHITE." Hinged inner ring for Glass bottom units is also "300° WHITE." The Guard and Concentric Louvres are finished "300° GRAY" for low brightness. Comes complete with heavy-duty porcelain socket, ready for wiring. Lamps burn in vertical position.



Type A
OPEN BOTTOM

Type B
LOUVRE LENS GLASS BOTTOM

Type C
SANDED GLASS BOTTOM

Type D
METAL GUARD BOTTOM

Type E
GLASS AND GUARD† BOTTOM

Type F
CONCENTRIC LOUVRES

75 TO 150-WATT SIZES*

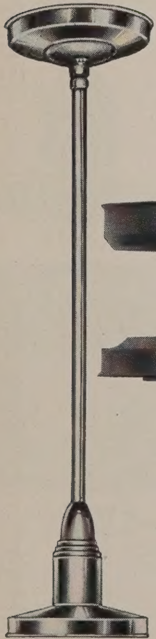
Cat. No.	Type	Hole Dia. In Ceil.	Depth In Ceil.	Bottom Flange Dia.	Shp. Wt.	List Price	Code
C4635	A	10¼″	10″	11¾″	6#	**$13.25**	PARAC
C4640	B	10¼″	10″	11¾″	9#	**19.00**	PARED
C4645	C	10¼″	10″	11¾″	8#	**17.00**	PARIF
C4650	D	10¼″	10″	11¾″	7#	**18.00**	PAROG
C4655	E	10¼″	10″	11¾″	10#	**19.50**	PARUH
C4660	F	10¼″	10″	11¾″	7#	**17.00**	PASAD

200 TO 300-WATT SIZES*

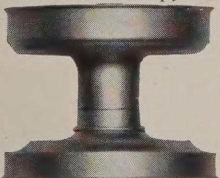
Cat. No.	Type	Hole Dia. In Ceil.	Depth In Ceil.	Bottom Flange Dia.	Shp. Wt.	List Price	Code
C4636	A	13¾″	12″	15″	8#	**$17.00**	PASEF
C4641	B	13¾″	12″	15″	12#	**26.00**	PASIG
C4646	C	13¾″	12″	15″	11#	**21.50**	PASOH
C4651	D	13¾″	12″	15″	10#	**23.00**	PASUJ
C4656	E	13¾″	12″	15″	13#	**25.50**	PATAF
C4661	F	13¾″	12″	15″	10#	**21.50**	PATEG

NOTES:
*The 75- and 100-watt are same size lamps and medium-to-medium socket extension should be used for both lamps to obtain proper filament position. The 200- and 300-watt lamps have same filament-center position.
†The Glass in "Glass and Guard" units, is same as in "Sanded Glass" types.
PLASTER FRAMES are not required. Housing has three lugs used for attachment to lath.

Guth BDHIC* HANGERS, FLANGES and AGLITES



PENDANT HANGER



BDHIC* HANGERS AND FITTERS — are designed to provide mechanical durability as well as modern design proportions. BDHIC's are safety types, provide four-point contact with Glass Globes. Made of heavy-gauge brass and finished electroplated Statuary Bronze. Brass Swivel on Hangers allow 30° swing. Furnished complete with Porcelain Socket and wire, but not wired. Pull-switches for canopy available; six ampere switch—list $1.50 each; ten ampere switch — list $2.50 each. Three-Way Sockets available at $1.50 list additional, for mogul sizes only.

*Pronounced "Beedick"—stands for "Best Darn Hanger In the Country."

BDHIC HANGERS

Cat. No.	Fit. Dia.	Skt.	Lgth.	Std. Pkg.	List*	Code
R6014	4″	Med.	24″	12	**$4.25**	PATIH
R6016	6″	Med.	24″	12	**4.50**	PATOJ
R6017	6″	Mog.	24″	12	**5.30**	PATUK
R6018	8″	Mog.	24″	12	**6.50**	PAUCH

BDHIC FITTERS

Cat. No.	Fit. Dia.	Skt.	Lgth.	Std. Pkg.	List*	Code
R5842	4″	Med.	5″	12	**$2.50**	PAUHM
R5843	6″	Med.	5″	12	**3.10**	PAUJN
R5844	6″	Mog.	6″	12	**3.75**	PAUMS
R5845	8″	Mog.	6″	12	**5.00**	PAUNT

NOTES: For longer lengths on Hanger types, add 50 cents list for MP2176 6″ Extension, and 60 cents list for MP2176 12″ Extension.
*Add 10% for less than standard package.

BDHIC FLANGES — are formed of steel and finished hard, glossy, Porcelain Enamel. Self-adjusting spring glass-holder, reduces breakage. Easy to install.

Cat. No.	Lts.	Skt.	Fitter	Dia.	Std. Pkg.	List *	Code
K1164	1	Med.	4″	7½″	12	**$2.20**	PAUTY
K1166	1	Med.	6″	10″	6	**2.50**	PAVAG
K1167	1	Mog.	6″	10″	6	**3.10**	PAVEH
K3395	2	Med.	6″	10″	6	**4.00**	PAVIJ

NOTE: Standard finish is White. Other finishes available, prices dependent on quantity, upon request. Pull-Switch six amperes, list $1.50 each.
*Add 10% for less than standard package.

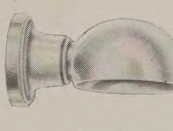
AGLITES: Formed of steel, Aglites are light-in-weight, easy to install and are permanently finished Porcelain Enamel. Listed in several designs.

Cat. No.	Socket	Conv. Outlet	Glass	Price	Code
A1072	Keyless	No	G-3144	**$2.50**	BIND
A1073	Pull	No	G-3144	**2.90**	BIPED
A1074	Keyless	Yes	G-3144	**3.00**	BIRCH
A1075	Pull	Yes	G-3144	**3.40**	BIRD
A1076	Keyless	No	G-3144	**2.50**	BIRTH
A1077	Pull	No	G-3144	**2.80**	BISON
A3346	Keyless	No	None	**2.25**	GLORY
A3347	Turn	No	None	**2.70**	GNARL
A3348	Keyless	Yes	None	**2.55**	GNASH
A3349	Turn	Yes	None	**3.00**	GNOME
A1064	Keyless	No	G-1382	**2.25**	BIBE
A1065	Pull	No	G-1382	**2.60**	BIER
A1066	Keyless	No	None	**1.25**	BIGHT
A1067	Pull	No	None	**1.55**	BIGOT

BDHIC FLANGE

A1075

A1066



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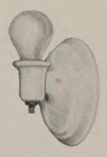


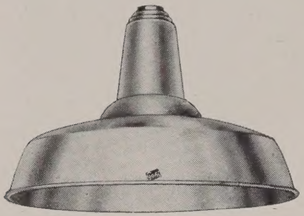
A3347

Fixtures listed on this page are F. O. B. St. Louis—No freight allowed

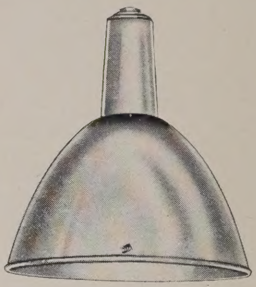
Guth INDUSTRIAL REFLECTORS . . . *Dome and High Bay Types*

Engineered for Industrial Service

● DOME REFLECTORS PORCELAIN ENAMELED STEEL



● HIGH BAY UNITS ALZAK ALUMINUM



DOME REFLECTORS — by Guth — are formed of heavy-gauge steel with reinforcing roll-welded necks. Processed Porcelain Enamel, electrically, they are finished with Ground Coat, two Super-White Coats on the interior, and finished with Light-Gray exterior. Made in four-sizes for up to 500-watt Filament lamps, and 250-watt Mercury Vapor lamp. Reflectors for Filament lamps provide 72½° light-cutoff.

HIGH BAY REFLECTORS — by Guth — are formed of heavy-gauge Aluminum and processed genuine ALZAK★ for efficient light direction and permanence. For 300- to 1500-watt Filament lamps, reflectors are engineered for 30°, 60° and 90° light-beam. Also made for 400-watt Mercury Vapor lamps. Dust-tight bottom glass covers available — see paragraph below.

DUST-TIGHT COVERS — Clear Glass Covers, in heavy steel-hinged frame with rigid industrial latches and hinge, complete with gasket. For use with Dome and High Bay Types.

PORCELAIN ENAMELED DOME REFLECTORS

Cat. No.	Wattage	Type Lamp	Dia.	Std. Pkg.	Pkg. Shp. Wt.	List Price	Code
AAA260	75-100	C	10″	10	32#	**$3.85**	PAMEZ
AAA261	150	C	13″	10	40#	**4.40**	PAMIB
AAA262	200	C	16″	10	48#	**5.25**	PAMOC
AAA263	250	H	16″	10	48#	**5.25**	PAMUP
AAA264	300-500	C	18″	5	39#	**6.85**	PANUZ

DUST-TIGHT COVERS

Cat. No.	Fits Reflector	Std. Pkg.	Pkg. Shp. Weight	List Each	Code
AAA255	14″	5	30#	**$6.00**	PANEB
AAA256	16″	5	40#	**7.00**	PANIC
AAA257	18″*	5	50#	**7.50**	PANOD

*Except on AAA277 and 278.
NOTE: Add 10% for less than standard package.

HIGH BAY ALZAK ALUMINUM REFLECTORS

Cat. No.	Wattage	Type Lamp	Light Beam	Dia.	Std. Pkg.	Pkg. Shp. Wt.	List Price	Code
AAA271	750-1500	C	30°	18″	5	20#	**16.00**	PAOHL
AAA272	400	H	20°	18″	5	20#	**16.00**	PAOJM
AAA273	300-500	C	60°	16″	5	18#	**15.00**	PAOLP
AAA274	750-1500	C	60°	18″	5	20#	**16.00**	PAONS
AAA275	400	H	40°	18″	5	20#	**16.00**	PAOPT
AAA276	300-500	C	90°	14″	5	17#	**15.00**	PAORV
AAA277	750-1500	C	90°	18″	5	20#	**16.00**	PAOVX
AAA278	400	H	70°	18″	5	20#	**16.00**	PAJAB

NOTE: For less than standard package, add 10% to list prices.

Prices listed on this page are list F. O. B. St. Louis—No freight allowed

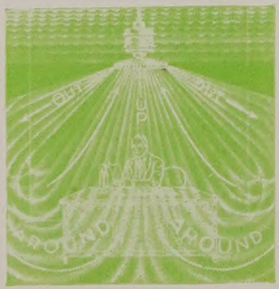
Guth GUTHFAN . . . *Complete Cycle Air Circulation*

"Cools You All Over"

7° to 10° COOLER AIR

Without Draft or Blast

GUTHFAN employs a patented revolutionary new principle of Complete-Cycle Air-Circulation. GUTHFAN draws *upward* the 7° to 10° Cooler Air from the lower part of the room, then circulates it at a 45° downward and outward angle *all* over the room. This type of circulation does not disturb the hot ceiling air, nor does it create drafts or blasts. GUTHFAN is economical as well as efficient . . . While circulating 5134 cubic-feet-of-air-per-minute, which is more than the combined circulation of three 16″ oscillating fans, GUTHFAN requires only half the amount of current.



LOIS JANUARY
Featured in
Universal Pictures

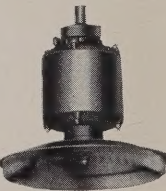
Cat. No.	Lights, Wattage	Lgth.	Dia.
R4813	Fan Only	44″	12″
R5234	450	44″	16″
R5699	600	44″	18″
R4808	600	44″	20″
R5661	600-900	44″	22″

Write for current GUTHFAN prices. Mention voltage, cycle and current in area concerned.

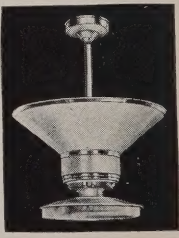
ATTRACTIVELY DESIGNED

With or Without Lighting Fixture

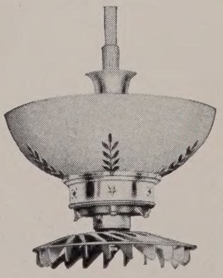
Model R4813 is solely a circulating unit with stem hanger and is finished English Brass or Silver. Models R5234 and R5699 combine Glass Bowl lighting with GUTHFAN Circulation. Bowl is White Opal Glass. Metal trim is finished White and Empire Gold. Models R4808 and R5661 of GUTHFAN provide Indirect Illumination —finished in ALZAK★ Aluminum with polished bands.



R-4813



R-4808 and R-5661



R-5234 and R-5699

GUTHFANS are available in many appealing styles and combinations for home, office or store. See GUTHFAN Catalog No. 8 for complete information.

★Trade Mark Registered Alcoa

TELEGRAPH CODE

CABLE ADDRESS: "Brascolite, St. Louis"

ADVISE AND ANSWER

ALIGN....Advise by mail
ALLOT....Advise by wire
ALOOF....Must have reply at once
ALPHA....Immediate reply requested to our letter/wire of ....
AMAIN...Refer to your telegram of ....
AMASS....Refer to our telegram
AMITY...Refer to your letter
ANGEL...Refer to our letter
ANILE....Order is being held awaiting your reply
ANKUS...——has sent telegram which reads——

INSTRUCTIONS

IBEX.....Big order pending
IMBOR...Customer's order number is
INCA.....Full report will be ready by
INCUS....Get in touch immediately with
INDUE....This must have immediate attention
INEPT....Name of customer is
INFER....Order amounts to
INFRA....Purchaser's financial standing is OK
INGOT....Purchaser's financial standing is unknown to us
IOTA......This is a consumer
IRADE....This is a dealer
ISLET.....This is a jobber
CUTTLE..Order being held pending payment past due account
ITNOR....Will you accept billing order received direct from ....
ITOPS.....Wired complete, ready to install excluding lamps

QUOTATIONS

QUASI....Have you quoted
QUEER...Wait for quotations
QUERY...Have quoted list
QUIB......You quote direct
QUIZ......We are quoting
QUOIN....Have quoted net

SHIP AND SHIPMENTS

SABLE....Change shipping directions
SABRE....Change shipping date to ....
SACLO....Get ready for shipping but hold for instructions
SAGA.....Refer to your order number ....
SALAD....Refer to our order number ....
SALLY....How soon can you ship?
SALME...Specifications not clear, advise
SALVO....Ship at once by express
SATIN....Ship at once by freight
SAURA....By what route did you ship order No....
SAUCY....Shipping weight (approximate number of pounds)
SAVOY....Ship the following samples
SCALE....Ship prepaid and charge on bill
SCAMP....Send tracer after shipment
SCARP....Shipment is being vigorously traced
SCOOP....We have made complete shipment on all orders
SEAM.....Ship with other goods the following
SEDAN....Where was order shipped to ....
SCENE....We will ship today
SCORN....We will ship tomorrow
SCOUR....We will ship latter part of week
SCOWL....We will ship early part of next week
SENSE....We cannot promise to ship before ....
SEPIA.....We can make immediate shipment
SEPOY....Shipment is now in course of transit
SHIRK....We made partial shipment on ....
SKULL....We made complete shipment on ....

For Telegraphic Figures Use the Following Key:

B	R	A	S	C	O	L	I	T	E
1	2	3	4	5	6	7	8	9	0

This Code Has Been Prepared For Your Convenience. Use It In Your Telegrams and Cables.

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Symbol of Amazing
Guth Performance
BENDIX

May each man find what he deserves . . .
A girl made up of lines and curves.
And may he see her flying high
On GUTH FLUORESCENT through the sky.
For such a girl and such a light
Are made to give all men delight!

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